REPORT RESUMES

ED 012 168 JC 660 272

THE JUNIOR COLLEGE PROGRAM OF INSTRUCTION AND THE EMPLOYMENT EXPERIENCES OF GRADUATES.

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REPORT NUMBER CU-1966-2 PUB DATE APR 66
EDRS PRICE MF-$0.18 HC-$2.80 70P.

DESCRIPTORS- *JUNIOR COLLEGES, *VOCATIONAL EDUCATION, *EMPLOYMENT PRACTICES, *EMPLOYMENT EXPERIENCE, *FOLLOWUP STUDIES, *TERMINAL STUDENTS, VOCATIONAL COUNSELING, GRADUATE SURVEYS, BERKELEY

THE CONTRIBUTION OF JUNIOR COLLEGES TO THE SUCCESS OF WORK EXPERIENCES AND ACTIVITIES OF MALE ALUMNI IS INVESTIGATED. INFORMATION WAS GATHERED FROM THE RECORDS OF THREE JUNIOR COLLEGES, QUESTIONNAIRES SENT TO ALUMNI 3 YEARS AFTER THEIR GRADUATION, AND INTERVIEWS HELD WITH A SELECTED NUMBER OF GRADUATES. THE INFORMATION COLLECTED SERVES AS A DEVICE FOR EVALUATING CURRENT COUNSELING PRACTICES AND CURRICULUMS AS THEY RELATE TO POST-GRADUATE EXPERIENCES. IT WAS FOUND THAT THESE JUNIOR COLLEGES DO SERVE THE STUDENT WHO FINDS WORK IMMEDIATELY AFTER GRADUATION, THAT MORE COUNSELING AND GUIDANCE SERVICES ARE NEEDED, THAT MOST STUDENTS FIND EMPLOYMENT LOCALLY, AND THAT MORE SPECIFIC VOCATIONAL TRAINING IS NEEDED. (HS)

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RESEARCH AND DEVELOPMENT
IN
VOCATIONAL - TECHNICAL EDUCATION

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THE JUNIOR COLLEGE PROGRAM OF INSTRUCTION AND THE EMPLOYMENT EXPERIENCES OF GRADUATES

UNIVERSITY OF CALIF.
LOS ANGELES

JUL 23 1966

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INFORMATION

REPORT NO. 1966-2

UNIVERSITY OF CALIFORNIA
BERKELEY

JC 660 272

THE JUNIOR COLLEGE PROGRAM OF INSTRUCTION

AND

THE EMPLOYMENT EXPERIENCES OF GRADUATES

A study of the program of instruction in relation to the employment experience of the graduates in the junior colleges of Alameda and Contra Costa Counties

Report No. 1966-2

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This study was made by Richard V. Matteson as a graduate student and research assistant in a series of studies in vocational-technical education of Alameda and Contra Costa Counties. The study was made under the direction of J. Chester Swanson and was partially financed by a grant from the Vocational Education Section of the California State Department of Education.

School of Education, University of California
Berkeley, California
April, 1966

TABLE OF CONTENTS

Page

List of Tables and Figures

Introduction 1

Method 4

  Design of Study 4

  Definition of Terms 4

  Selection of Participants 5

  Procedure 7

The Participants 8

  Description of Graduates--Age, Grade Point Average and Aptitudes 8

  College Programs--Transfer and Terminal 8

  Programs Chosen Now if Graduates Could Start Again 12

Postgraduate Experiences 15

  Continuing Students 15

  The Mainly Military Group 18

  Occupational Returnees 18

The New-to-Work Graduates 23

  Description--Age, Grade-Point Average and Aptitudes 25

  Work Experiences 26

  Usefulness of Junior College Training in Preparing for Work . . 28

  Level of Work and Responsibility 37

  Pay 37

  Job Satisfaction 41

    Questionnaire Responses Three Years after Graduation . . . 42

    Interview Responses Four Years after Graduation 44

  Junior College Experiences as Related to Employment 48

  Counseling and Guidance as Related to Career Choices 49

Summary, Conclusions and Implications 54

  Summary 54

  Conclusions 57

  Implications for the Three Junior Colleges of the Study 58

  Implications for Further Study 61

LIST OF TABLES

Page

1. Ratings of Certain Characteristics of Junior Colleges 6

2. Programs in Which Respondents were Enrolled when in College, and their Present Choices if Re-entering College. 12

3. Majors of the Graduates when in Junior College and Choice of Major if Starting College Again 14

4. Comparison of Certain Characteristics of the Junior College Graduates 16

5. Major Fields of the Continuing Students, the Mainly Military Group, and the Occupational Returnees when in Junior College 16

6. Majors of all Graduates Compared to Majors who Continued in College and Percentages in Each Field who Transferred 17

7. Salaries Earned by Graduates Immediately After Graduation Compared with Salaries Earned Three Years Later 21

8. Job Satisfaction of Graduates Who Returned to Employment Held Before and/or During Attendance at Junior College 22

9. Job Satisfaction Three Years after Graduation Reported by the Graduates Who Returned to Work in Previously Held Positions . . . 23

10. Average Age, Grade Point Average, and Aptitude of the Graduates Who Found Full-Time Work for the First Time 25

11. Subject-Matter Majors of the Graduates Who Found Full-Time Work for the First Time 26

12. Place of Work of the Graduates Who Found Full-Time Work for the First Time 27

13. Usefulness of Junior College Training in Preparing Graduates for Work 28

14. Usefulness of Junior College Training in Certain Aspects of the Employment Taken by the New-to-Work Graduates 29

15. Jobs Held Related to College Majors of the New-to-Work Graduates Who Indicated their Junior College Training Had Helped Prepare Them for their First Jobs 30

16. Jobs Held Related to College Majors of the New-to-Work Graduates Who Indicated their Junior College Training Had Not Prepared Them for their First Jobs 32

17. Attitude Toward and Preparation for Type of Employment Taken by the New-to-Work Graduates 33

18. Attitude Toward and Preparation for Type of Employment Held Three Years after Graduation by the New-to-Work Graduates 34

19. Amount of Experience Beyond Junior College Necessary for First Jobs Taken after Graduation by the New-to-Work Graduates 35

20. Amount of Responsibility in First Jobs Taken after Graduation by the New-to-Work Graduates 35

21. Amount of Experience Beyond Junior College Necessary for Jobs Held Three Years after Graduation by New-to-Work Graduates 36

22. Amount of Responsibility in Jobs Held Three Years After Graduation by the New-to-Work Graduates 36

23. Wages Earned by the New-to-Work Graduates in the First Jobs Held After Graduation 37

24. Wages Earned by the New-to-Work Graduates in the Jobs Held Three Years After Graduation 38

25. Comparison of New-to-Work Graduates from Transfer and Terminal Programs Who Had Taken Special Training for First Jobs Held After Graduation 39

26. Comparison of New-to-Work Graduates from Transfer and Terminal Programs Who Had Taken Special Training for the Jobs Held Three Years After Graduation 40

27. Comparison of Wages Earned by Trained and Untrained New-to-Work Graduates in First Jobs Held After Graduation 40

28. Comparison of Wages Earned by Specially Trained and Untrained New-to-Work Graduates in the Jobs Held Three Years After Graduation . . . 41

29. Degree of Satisfaction with their Work Expressed by the New-to-Work Graduates Three Years After Graduation 42

30. Degree of Satisfaction with Personal Relationships in their Jobs Expressed by the New-to-Work Graduates Three Years After Graduation 43

31. Degree of Satisfaction with Wages and Job Security Expressed by the New-to-Work Graduates Three Years After Graduation 44

32. Reasons for Job Satisfaction Reported by the New-to-Work Graduates 47

33. Responses of Graduates Concerning Desirable Amount of Counseling and Guidance Compared with that Given in Vocational-Choice Assistance to Junior College Students 50

34. Estimates by Those Interviewed of the Benefits to be Derived from Taking the other Program -- Transfer or Terminal -- than the One Taken in Junior College 52

35. Opinions of Graduates Interviewed Concerning Whether They Would Have Stayed in Junior College Had they Not Been Permitted to Take the Programs they Did 52

36. Amount of Job Success Attributed by Graduates to Junior College Training when Interviewed Four Years After Graduating 53

LIST OF FIGURES

FIGURE Page

1. Group Characteristics of the Population: Age at Graduation 9

2. Group Characteristics of the Population: Grade Point Averages 10

3. Group Characteristics of the Population: Academic Aptitude Percentiles Based on National Norms 11

THE JUNIOR COLLEGE PROGRAM OF INSTRUCTION

AND

THE EMPLOYMENT EXPERIENCES OF GRADUATES

INTRODUCTION

The California Education Code (10602) states in part that "courses of instruction designed to prepare persons for agriculture, commercial, homemaking, industrial and other vocations" may be included in the course of study of two-year junior colleges. Most two-year junior colleges in California do include vocational courses in their curricula in order to prepare the terminal student for an occupation.

Other students upon entering these colleges may indicate that they plan to transfer to a four-year college or university; to meet the needs of these students parallel lower division courses are offered. Among these declared transfer students, however, are many whom Clark[1] has identified as latent terminal students. Because of limited academic aptitude, such students will not transfer but like the declared terminal student will seek employment after graduation. Should these students be guided into vocational programs? Or, will they graduate from the regular lower division programs, find employment, and succeed as well as the graduates with specialized vocational training? This study is an attempt to answer some of these questions by studying certain male graduates from regular lower division and vocational programs and relating their employment experiences to their junior college training.

With limited support available to finance public education the competition for funds may result in limiting certain types of programs. In the past, college has traditionally meant four years or more of training for the professions. Today the junior colleges provide the traditional first two years of college or university work, as well as training for trade, technical, and semi-professional employment, in a period of two years or less. The training for employment is a vital part of the junior college concept, and this function must not be curtailed because of competition for funds, or lack of public or institutional support. As John Gardner[2], now Secretary of Health, Education, and Welfare, stated: "We need excellent physicists and excellent mechanics."

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[1] Clark, Burton R., The Open Door College -- A Case Study. New York: McGraw-Hill Book Co., 1960, pp. 68 - 85.

[2] Gardner, John, Excellence, Can We Be Equal and Excellent too? New York: Harper & Brothers, 1961, p. 131.

Existing occupational training programs in the junior college must be studied and evaluated in an effort to find ways to make these programs better. The information collected needs to be used to improve the programs and also to let the public supporting the colleges know the importance of this function. The occupational-training aspects of the junior college programs must keep pace with expected enrollment increases. Perhaps even greater emphasis should be given to such occupational training in light of the changing world of work which today calls for increased skills and knowledge requiring more and more advanced training.

Smith[3] compared the curricula available at junior colleges and reported that occupational offerings in these schools increased slightly from 1952 to 1963. However, in his opinion the number of programs offered fell far short of meeting the needs of the students who should be taking such programs. He considered the lack of suitable vocational offerings a failure of the junior colleges to meet their "accepted purposes." He urged strong administrative leadership to encourage the development of additional vocational programs even against the opposition of local curriculum committees; these, he felt, were too frequently dominated by faculty members whose orientation was toward the transfer function of the junior college.

Clark[4], in a paper prepared for the 1963 Conference on Sociological Backgrounds of Adult Education, reported that industrial changes since World War II have bound education closely to the economy. Higher education, especially, is expected to train and retrain adults to meet the changing employment market; and to provide personnel with expertise to develop new programs to match the technological advances which characterize work today. As more people are trained, technological changes increase more rapidly and the need for additional trained personnel becomes even greater.

Willard Wirtz, Secretary of the United States Department of Labor, affirmed the need for extensive training of youth to compensate for the rapidly disappearing unskilled jobs due to automation and technological change. "Every American youngster," he stated, "has to be given today, as part of his education, some know-how about making a living -- which means, for a great many of them, vocational education."[5] Gardner, discussing national goals in education, said:

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[3] Smith, Ralph B., "Do Curriculums Reflect Purposes?" Article accepted for publication by the Junior College Journal.

[4] Clark, Burton R., "Knowledge, Industry and Adult Competence," Berkeley: Center for the Study of Higher Education, University of California, 1963. Mimeographed.

[5] Wirtz, Willard W., Facts YOU Should Know about Labor and Vocational Education. Washington, D. C.: American Vocational Association, Inc., 1963, p. 2. Pamphlet.

> "Undergraduate schools that continue to emphasize vocational courses have a very important role to play as sub-professional technical schools for students not going on to full professional education. The effective use of manpower requires substantial numbers of technicians and sub-professional specialists who are as skilled at their levels as the highest professional at his level. Junior colleges and undergraduate vocational programs should meet this need."[6]

Youth must not only be trained but must be trained to their maximum capacity to assure the best use of each individual in the economy, for, as Venn[7] stated:

> "When the drop-outs from the four-year colleges and graduates of junior college academic programs do not find meaningful entry jobs, they experience underemployment rather than unemployment and the underemployment of those with some college study heightens unemployment among those with no college work. The young man with a year or two of college working at the supermarket check-out counter may well have the ability to be a highly skilled craftsman or technician. By taking a job at the supermarket, he creates a double loss in our manpower pool: the job at the higher ability level remains vacant while he displaces the lower-ability person who could function well in that position."

This study attempts to investigate and describe the activities and successes of male junior college alumni in their activities after graduation, in an effort to establish the contribution of the college to the success of its graduates, particularly as they found employment. The study was developed with the hope that the information collected might suggest how the colleges participating in the study and others like them might improve their programs, and further, might suggest areas needing additional research to make junior college education, particularly occupational training, more effective.

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[6] Gardner, John W., "National Goals in Education" in Goals for Americans: The Report of the President's Commission on National Goals. Englewood Cliffs, New Jersey: Prentice-Hall, 1960, pp. 91 - 92.

[7] Venn, Grant, Man, Education and Work. Washington, D. C.: American Council on Education, 1964, p. 81.

METHOD

Design of the Study

This investigation was concerned with the experiences of graduates after they left junior college. To secure the information needed, the cooperation of three junior colleges was secured, and from college records available information was collected about the graduates. A written questionnaire was developed and mailed to each of the alumni three years after their graduation. The responses returned were tabulated. Those graduates who indicated that they had worked for most of the three-year period were contacted for personal interviews to validate the information on the questionnaire and to secure more information as to how their junior college training had related to their employment experiences. The final stage in the design was the tabulating and reporting of the information received.

Definition of Terms

In the development of this study it became apparent that a few words in general use by persons familiar with the junior college movement would have to be given special definition when used in the context of this investigation in order to simplify the presentation and to avoid misunderstanding. These definitions are stated below.

Junior College Graduate, in the context of this study, includes not only the traditional definition of a graduate as one who earns an AA degree but anyone who completes an organized program at the college leading to the awarding of the AA degree or a certificate of completion.

Aptitude, unless otherwise stated, refers to academic aptitude as measured by commonly used college level tests such as School and College Ability Tests, American Council of Education Psychological Examination percentiles based on national norms for college freshmen.

Terminal Program is any program, Trade-Technical or Liberal Arts, taken in the junior college by a student not planning to go on to a four-year college or university upon graduation, and a Terminal Student is anyone enrolled in such a program.

Transfer Program is any junior college program, Trade-Technical or Liberal Arts, taken by a student who expresses the intention of transferring whether the transfer is accomplished or not, and a transfer student is anyone in such a program.

Occupational Program is any program which is designed to lead the student directly to employment in the trades, technical, or semi-professional fields immediately upon graduation.

Other terms useful in describing certain aspects of this study have special meanings as follows:

Hire-out is a special kind of drop-out who terminates his schooling either temporarily or permanently because he has found a job appropriate to his training and interests. Such a student may later complete his junior college on a part-time basis, or consider his formal schooling completed due to his successful employment.

Occupational Returnee refers to a student who after completing junior college returns to the full-time position which he had held before and perhaps even during the period of his junior college training. Such graduates tend to use the junior college training for general education or to become better qualified for advancement in a field in which they are already qualified workers, instead of using the junior college training as a step toward a first job.

New-to-Work Graduates refers to those graduates who, upon completion of their junior college training, find full-time employment on a long-term basis for the first time in their lives. For most of these graduates these positions will be the start of a working career.

Selection of Participants

The three junior colleges whose graduates participated in this study were chosen in part because of convenience of location, but also because these colleges were large enough to graduate a substantial number of students in 1961. Their catalogues listed aims and purposes consistent with those of the majority of the junior colleges in the state, and the breadth of their vocational programs did not seem atypical from those of other junior colleges. Two of the colleges were urban and one was rural, yet all three served the same general employment market in the San Francisco East Bay Area.

The colleges, in the kinds of technical and vocational programs offered, represented the spectrum of positions typically held by junior colleges with regard to occupational training. In addition, these three colleges offered twenty-six different technical and vocational majors to their students in 1961 which, except for agriculture, horticulture, and forestry, were representative of the major types of occupational curricula offered by California junior colleges.[8]

All the colleges were preparing the majority of their students for the same employment market, or for transfer to the same university or state colleges. Transfer students from these colleges in the past had earned grades at the University of California, Berkeley, and at San Francisco State, similar to those of transfer students from the other junior colleges in the state. Four hundred and seventeen graduates from these three junior colleges attended the University of California, Berkeley, between 1957 and 1960 and earned a grade point differential of -.54 while the grade point differential for all the junior college students in attendance at the University of California, Berkeley, was -.49 for this same period, a difference of -.05. At San Francisco State College in 1960, 115 students from these three junior colleges were in attendance and had a grade point differential of -.19. The average differential of all junior college transfer students at San Francisco State College in 1960 was -.26, a difference of +.07.

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[8] California State Department of Education, A Study of Technical Education in California. Sacramento: State Printing Office, 1959. p. 20.

A description of 581 accredited junior colleges in the United States was reported by Richards et al.[9] Their study was designed to identify different aspects of junior colleges in order to compare differences and similarities as revealed by the size, the types of programs offered, the training of faculty, and other characteristics. The researchers found that in most of the characteristics identified, two of the colleges in the present study were very close to the average for the state. The characteristics are identified and compared in Table 1.

TABLE 1

Ratings of Certain Characteristics of Junior Colleges

	All California Public Junior Colleges			College A*	College B*	College C*
Characteristics	Mean	Median	S.D.	Mean	Mean	Mean
Cultural Affluence	47.2	46.5	2.9	48	56	48
Technological Specialization	52.5	52.4	3.3	52	58	52
Size	64.9	64.1	11.6	70	75	70
Age	46.9	46.5	8.9	42	41	42
Transfer Emphasis	51.4	54.5	7.7	50	49	50
Business Orientation	45.7	45.2	3.6	44	43	44

*To preserve the anonymity of the colleges in the study, they are referred to as College A, College B, and College C in this table.

It was not the intention to try to establish the junior colleges of this study as representative of all the junior colleges in the state, but in grades earned by transfer students and in other characteristics there appears to be considerable similarity between these colleges and the others in the state.

Since one of the major concerns of the investigation was with the employment experiences of graduates, and since a larger number of males than females was expected to enter employment, it was decided to limit the inquiry to male graduates. To secure returns from as large a number as possible, all the males from the classes of 1961 at the three colleges were included in the population to be considered. The class of 1961 was chosen when it was learned that one of the cooperating colleges had conducted a survey among its 1960 graduates, and there was concern that this group might be less cooperative in returning the questionnaires than another class. Since the follow-up was undertaken in 1964, the class of 1961 had the advantage of being near enough in time to allow for a reasonably accurate address list at each college. Making the follow-up three years later provided enough time for patterns of the graduates' experiences to be established.

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[9] Richards, James M., Jr., Lorraine M. Rand, and Leonard P. Rand, A Description of Junior Colleges. Iowa City, Iowa: American College Testing Program, 1965.

Procedure

It was decided to limit the investigation to three of the five junior colleges in Alameda and Contra Costa Counties, since one college had a curriculum emphasis on vocational programs which was nearly unique in the state, and the other junior college had not been established in 1961.

Lists of all the graduates in the class of 1961 (both June and February graduates) were secured from the registrars at the three junior colleges. At the three colleges male graduates totaled 369 in this year. From the college records the male graduates' last known addresses were secured. Also obtained from the college records were the birth dates of the graduates, their cumulative grade point averages, and their aptitude scores. Aptitude tests given at the three colleges included School and College Ability Tests (SCAT), American Council on Education Psychological Examination (ACE) and College Qualification Test (CQT).

The questionnaire was mailed to each of the male graduates of the class of 1961 from these three colleges during the summer of 1964. The information from the questionnaires returned by the respondents was interpreted, coded, and tabulated on data processing equipment. The cards were verified for accuracy and any noted irregularities were corrected.

Data were collected from 276 respondents, which is seventy-five percent of the total population. A group of fifty alumni were identified who had spent more than two of the three years since graduation in full-time employment. Since this investigation was particularly concerned with the graduates' employment experiences as these related to their junior college training, these fifty were contacted again in the summer of 1965 and personal interviews were arranged with as many as could be reached who were willing to answer additional questions. Thirty-three graduates were still residents of the San Francisco Bay Area. Of the group located, three refused to participate further in the investigation. One was presently out of the state with the army, and another was a patient at Napa State Hospital. A total of twenty-eight were cooperative in verifying and expanding the answers given a year earlier on the written questionnaire.

THE PARTICIPANTS

The information presented here provides pertinent facts about certain characteristics of the population and reports the post-junior college experiences of the graduates. The intention of this part of the study was to establish a composite picture of the male junior college graduate and what he does after he completes his junior college training.

Description of Graduates

Age. From college records, birth dates were secured for 365 graduates of the 369 who comprised the population of the study. Age to the nearest birthday was calculated for each individual at the time of his graduation. The youngest graduate was 18 years old and the oldest was 54. The average age was 25.19 years. The distribution of the population is shown in Figure 1.

Grade Point Average. Grade point averages (G.P.A.) were available for 355 of the graduates included in the study. The lowest G.P.A. earned by a graduate on a 4.0 scale was 1.33, the highest was 3.89, and the average was 2.27. The grade point averages grouped in grade point intervals of 0.25 are shown in Figure 2.

Aptitude Scores. The three colleges gave aptitude tests to their entering freshmen. The tests included School and College Ability Tests (SCAT), American Council on Education Psychological Examination (ACE), and College Qualification Test (CQT).

Information on aptitudes from the college records was converted to percentiles of the national norms, using Darley.[10] Two hundred and ninety-three aptitude scores were available at the college for this population. The average aptitude was at the 42nd percentile. The numbers in each percentile are shown in Figure 3.

College Programs

Replies to the mailed questionnaire indicated that when responding alumni were students, most of them (81 percent) considered themselves in transfer programs. This is greater by 14 percent than the percentage of students who were reported by Medsker [11] as being enrolled in transfer programs by junior colleges in California. The difference may be due to a higher percentage of transfer students than of terminal students completing the requirements for the associate in arts degree, since Medsker reported percentages of total enrollments and this study considered graduates only.

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[10] Darley, John J., Promise and Performance: A Study of Ability and Achievement in Higher Education. Berkeley: Center for the Study of Higher Education, University of California, 1962, pp. 180-183.

[11] Medsker, Leland L., The Junior College: Progress and Prospect. New York: McGraw-Hill Book Company, 1960, pp. 106-107.

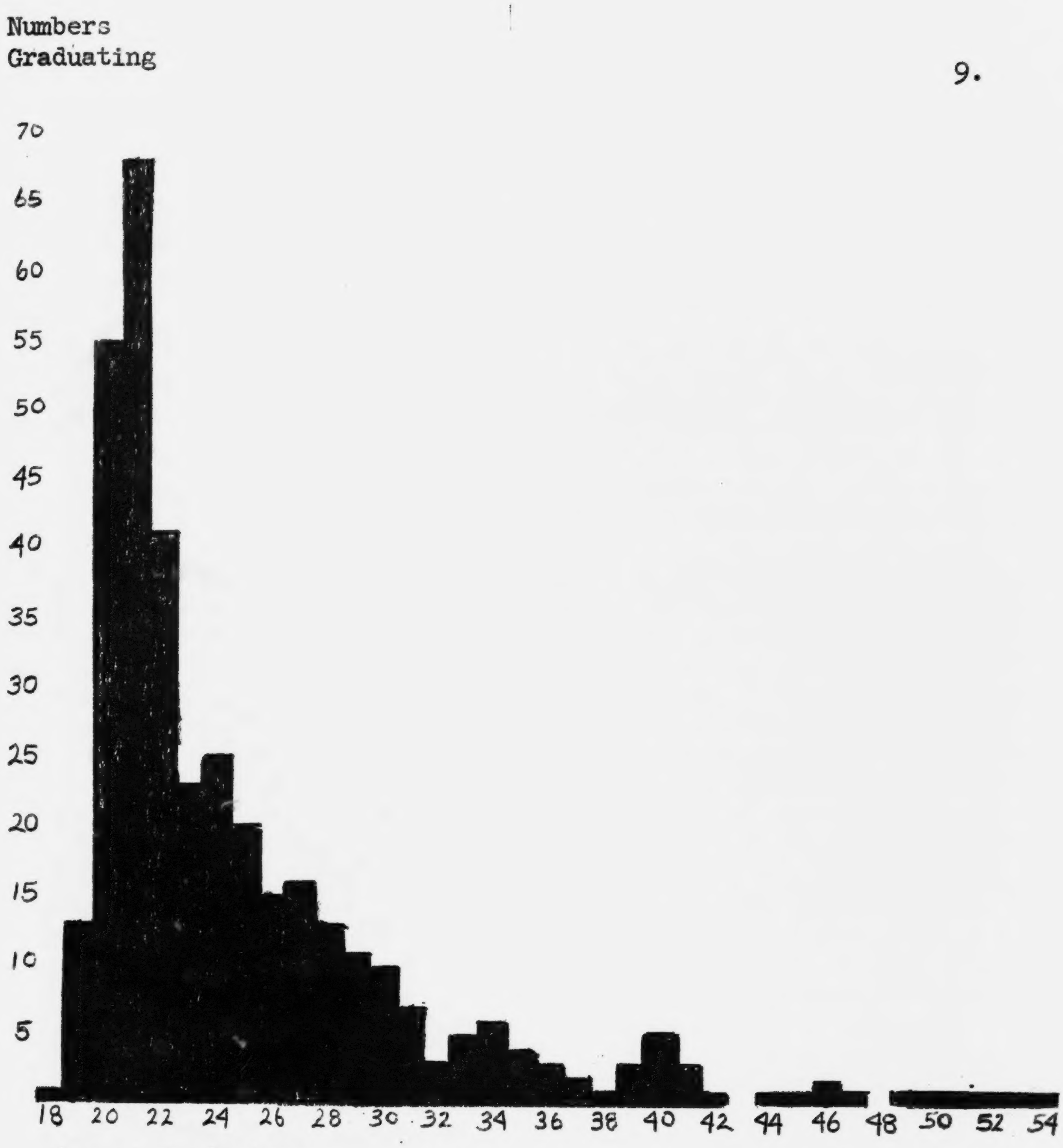

Figure 1. Group Characteristics of the Population: Age at Graduation

Average - 25.19 Years Old
Range - 18 to 54 Years Old

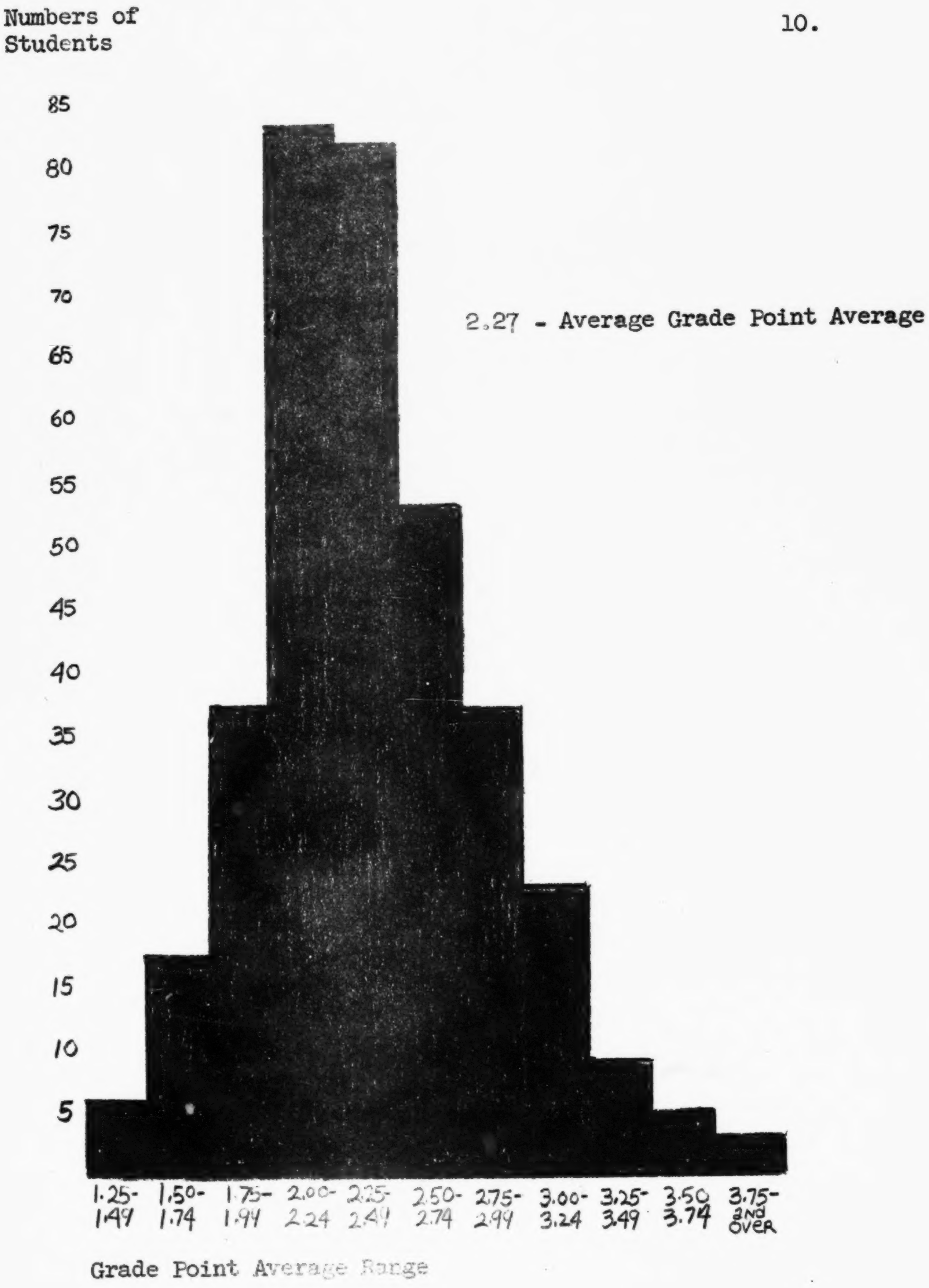

Figure 2. Group Characteristics of the Population: Grade Point Averages

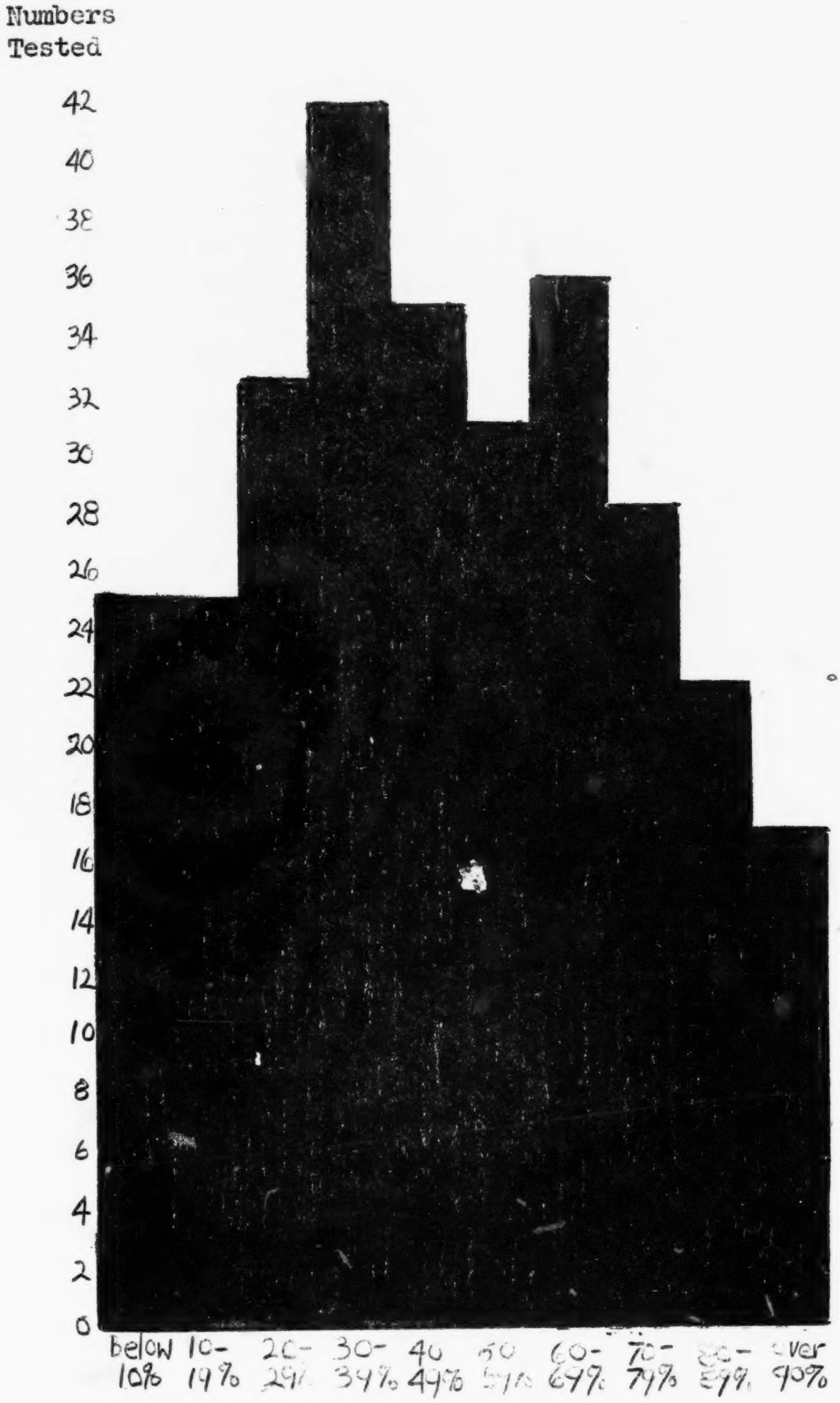

Figure 3. Group Characteristics of the Population: Academic Aptitude Percentiles Based on National Norms

At the three colleges, totals from transfer and terminal programs were as follows: transfer, 185 (81 percent); terminal, 43 (19 percent).

Programs Chosen If Graduates Could Start Again

Asked what type of program they would take if starting again, an even larger percentage (91.5 percent) of the alumni said they would choose a transfer program. Their comments indicated their belief that the further one pursues his college training, the better his chance of occupational success in any field. Viewed by the alumni in retrospect, the transfer program increased in popularity. Total responses indicated that if the graduates were to start college again, their choice of type of program would be: transfer, 204 (91.5 percent); terminal, twelve (5.5 percent); undecided, seven (3 percent).

In Table 2 are shown the majors elected by the respondents when they were in college, and the choices they would now make if re-entering college.

TABLE 2

Programs in Which Respondents Were Enrolled When in College, and Their Present Choices If Re-entering College

Program in College	Number	Percent	Present Choice	Number	Percent
Business	66	28.5	Business	74	35.0
General Studies	50	21.5	General Studies	13	6.0
Social Sciences	41	18.0	Social Sciences	43	20.0
Engineering, Architecture	18	8.0	Engineering, Architecture	27	13.0
Mathematics, Science	15	6.5	Mathematics, Science	25	12.0
Electronics	13	5.5	Electronics	13	6.0
Humanities	9	4.0	Humanities	6	3.0
Physical Education	7	3.0	Physical Education	3	1.5
Art, Music, Drama	6	2.5	Art, Music, Drama	6	3.0
Trades	6	2.5	Trades	1	0.5
Total	231	100.0	Total	211	100.0

The small number graduating in the trades may be explained in part by the fact that many of the better qualified students in the trade majors are "hire-outs" before they complete the formal junior college program. This, however, does not explain the five out of six who would not choose the trade major again if they were to re-enter college at the present time.

The largest number of male students chose a business major when in college, and if all of these alumni were to start again and could choose any major they liked, the business field would still have the largest number of participants although not necessarily the same participants. The art-music-drama majors and the trades majors had the smallest numbers in their programs, as shown in Table 3. If the students were to choose majors again, only one of the six who had taken a trade major indicated he would choose that major again, whereas the art-music-drama majors showed the highest rate (83 percent) of loyalty to their original choice of fields.

The electronics and engineering fields along with business are occupational in orientation and have the prestige associated with white-collar work and full college-level requirements. The numbers in electronics would remain the same but engineering majors would increase. Shifts from other fields, particularly from general studies, business, electronics, and mathematics-science majors, accounted for the increases in engineering.

When in college many of these graduates were not committed to any specific fields and reported their majors as general studies. In retrospect many of them would choose a specific major, and as a result general studies experienced considerable loss due to defections to other fields, as shown in Table 3. The graduates defected to the other fields in a pattern which seemed to parallel closely the general preferences of the other students for majors. That is, general studies alumni defected to: (1) social science, (2) business, (3) engineering, (4) mathematics-science, and (5) electronics, in that order. The order of preference of majors for all alumni was: (1) business, (2) social science, (3) engineering, (4) mathematics-science, and (5) electronics.

In reply to the question whether they would recommend that a high school graduate attend a junior college, 199 respondents said they would (87.5 percent), and nine said they would not (4 percent); twenty were undecided (8.5 percent).

General endorsement of the junior college program is shown by the 87.5 percent favorable response. Undecided respondents frequently qualified their indecision by stating that it would depend on the high school student.

TABLE 3

Majors of the Graduates When in Junior College and Choice of Major If Starting College Again

Major	Choice in College	Would Choose Same Major Again	Percentage Level	Defectors from Major to Other Fields*	No.
Business	66	50	76%	To: Electronics Social Sciences General Studies Mathematics-Science Engineering	3 3 1 3 2
General Studies	50	10	20	To: Social Sciences Engineering Electronics Business Mathematics-Science	12 5 1 11 3
Social Sciences	41	25	61	To: Business Engineering Mathematics-Science Electronics Physical Education	6 2 4 1 1
Engineering-Architecture	18	13	72	To: Mathematics-Science General Studies Business	2 1 1
Mathematics-Science	15	11	73	To: Engineering General Studies Electronics	2 1 1
Electronics	13	6	46	To: Engineering Business	3 3
Humanities	9	6	67	To: Mathematics-Science Arts	2 1
Physical Education	7	2	29	To: Social Sciences Business	3 2
Art-Music-Drama	6	5	83		
Trades	6	1	17	To: Electronics Business	1 1

*Twenty respondents did not indicate any preference for a major if they were starting again.

POSTGRADUATE EXPERIENCES

Experiences of the graduates reporting fall into three major groupings. The largest group, 148 (54 percent), pursued a full-time college program for a year or more of the three-year period. Many of these graduates worked while they attended a four-year college. In the three-year period of the study, 112 (75 percent) of them had earned the A.B. degree. The other thirty-six, however, judging from their reported participation in four-year college and university work, also appeared to have used the junior college training for its transfer function.

The smallest group, seventeen (6 percent) did not pursue a college career, nor had they found full-time employment. This group consisted primarily of graduates who had spent the major part of the three years in the military service. In addition to fourteen in the military service, one had been bedridden ever since graduating, another had died, and one had held only part-time temporary jobs during the three years immediately following his graduation.

The third group was composed of the remainder of the graduates, 111 (40 percent) who worked full-time most of the three years covered by the study. Quite a number of these continued their education on a part-time basis while working, but since their major efforts were in an occupation, they were not listed as part of the continuing student group even though several indicated their intention to complete the baccalaureate. This group of employed graduates can be divided into two distinct categories. One category, occupational returnees, worked after graduation in the same jobs held before and usually during their attendance at the college. These graduates did not use the junior college training for job placement but rather for self-improvement and sometimes advancement in their occupations. In the second category were graduates who were fully employed most of the time for the three years of the study. Unlike those in the first category, these graduates "explored" various employers and fields during these three years. This second category will be considered in some detail later.

The characteristics of the continuing students, of the occupational returnees, and of those graduates who neither continued in school nor entered the civilian labor force will be described below.

Continuing Students

Of the male graduates in the population under study, 148 (54 percent) went on to further full-time college work.

The graduates who continued further schooling were younger than their classmates. As shown in Table 4, these graduates were twenty-three years old on the average; had earned a G.P.A. in junior college of 2.52 on a 4.0 scale; had averaged at the 44th percentile in academic aptitude based on national norms for college students; had scored the same on their entering aptitude tests, on the average, as their classmates; and had earned better than average grades. Their major fields when in junior college are shown in Table 5.

TABLE 4

Comparison of Certain Characteristics of the Junior College Graduates

Characteristics	Total Population Responding	Graduates Continuing in College	Graduates Neither Working nor in College	Working Graduates	
				Returning to Jobs	Employed for First Time
	N = 276	N = 148	N = 17*	N = 61	N = 50
Average Age	25.2	23.0	21.0	33.0	23.9
Average G.P.A.	2.29	2.52	2.10	2.55	2.19
Average Academic Aptitude (percentiles)	43rd	44th	29th	50th	43rd

*Includes 14 graduates in the military service for the first time.

TABLE 5

Major Fields of the Continuing Students, the Mainly Military Group and the Occupational Returnees When in Junior College

Majors	Continuing Students		Mainly Military		Occupational Returnees	
	N	%	N	%	N	%
Business	25	21.0	3	30.0	22	41.5
General Studies	25	21.0	2	20.0	11	21.0
Social Sciences	29	25.0	2	20.0	9	17.0
Engineering-Architecture	8	7.0	1	10.0	4	7.5
Mathematics-Science	11	9.5	0	- -	3	5.5
Electronics	5	4.0	0	- -	2	3.5
Humanities	6	5.0	0	- -	0	- -
Physical Education	6	5.0	0	- -	0	- -
Art-Music-Drama	3	2.5	0	- -	1	2.0
Trades	0	0	2	20.0	1	2.0
Total:	118	100.0	10	100.0	53	100.0

As shown in Table 6, a higher percentage (85 percent) of the physical education majors transferred than of majors from any other field. The only other fields in which more than 50 percent of the graduates continued in college were the mathematics-science majors (73 percent), the social science majors (71 percent), and the humanities majors (67 percent).

TABLE 6

Majors of All Graduates Compared to Majors Who Continued in College and Percentages in Each Field Who Transferred

Majors	All Graduates	Graduates Continuing	Percentage Transferring
Business	66	25	38.0
General Studies	50	25	50.0
Social Sciences	41	29	71.0
Engineering-Architecture	18	8	44.5
Mathematics-Science	15	11	73.0
Electronics	13	5	38.5
Humanities	9	6	67.0
Physical Education	7	6	85.0
Art-Music-Drama	6	3	50.0
Trades	6	0	0
Total	231	118	-

Of these continuing college students, 120 (94.5 percent) reported they were declared transfer students when in junior college, and seven (5.5 percent) considered themselves terminal students. Of the 148 graduates who continued their college programs and who were classified as continuing students for this study, 141 also reported on their work experience during the three years covered by the study. For most of these students part-time and/or full-time employment experiences were interwoven with their schooling. Patterns varied with individuals and no obvious trends were apparent from an analysis of these data. For some it appeared that they went to work full time until they could afford to return to college. Others worked full time during the summer and part time during the school year; some continued with a full-time school program and also worked a forty-hour week. Still others reported having attended college for only three years of the study. In addition to attending college full time for a year or more during the three years following junior college, this population also reported having worked as follows:

	N	%
Worked full time and part time and went to college	46	32.5
Worked full time and went to college	44	31.0
Worked part time and went to college	32	23.0
Went to college only	19	13.5
	141	100.0

The Mainly Military Group

There were seventeen graduates who, for the three years of the study, were neither part of the civilian labor force nor could they be classified as students. The majority of these graduates spent most or all of the three years in the armed forces. This population includes only those graduates who joined the armed forces for the first time after 1961. Not included in this group are four career military men who were in the military before, during, and after their junior college work. These four career military men are reported with the occupational returnees. As shown in Table 4, the military group were, on the average, younger than their classmates (twenty-one years of age), earned a lower grade point average (2.10) when in junior college, and also were lower than their classmates in academic aptitudes (29th percentile). Of the respondents in this group, seven commented on the usefulness of their junior college training in preparing them for their military activity; two indicated their junior college training had been very useful; the other five indicated the junior college training had been useful; no one reported that the junior college training was a disadvantage or that it made any difference in his military experience.

Many of the male graduates in this investigation indicated that they had fulfilled their military obligation before finishing junior college, and nineteen of the respondents reported military service of six months' duration or less after graduating from junior college. These individuals were included either in the college continuation or the work population, whichever was appropriate.

Occupational Returnees

Of the 276 graduates responding to the mailed questionnaire, sixty-one (22 percent) were identified as returning to previous employment after completing junior college. While attending junior college many of these graduates had worked full time or part time in the jobs to which they returned.

As shown in Table 4 (page 16), this group averaged thirty-three years of age, eight years older than their classmates. They also earned a higher grade point average (2.55) than even the transfer group. They averaged at the 50th percentile in academic aptitude as shown by the entrance test scores earned by nearly half of this group. Many had started their junior college programs as evening or part-time students, and had never taken the test usually required for college entrance.

Thirty-nine (74 percent) of this group considered themselves in a transfer program, and fourteen (26 percent) reported they were in a terminal program. The majors of this group when in college have been reported in Table 5.

No one majored in the humanities or physical education, but otherwise the rank order of majors follows the same pattern as that of the total population. Even the percentages are similar to those for the total population except for business, which is considerably higher for this group.

Forty-nine of the occupational returnees reported that they came from the following types of positions.[12]

Eleven Professional Positions

- 4 Engineers
- 1 Engineering Technician
- 1 Senior Accountant
- 1 Assistant Bank Manager
- 1 Personnel Supervisor
- 1 Production Supervisor
- 1 Buyer
- 1 Economist

Twelve Clerical and Sales Positions

- 3 Office Clerks
- 2 Letter Carriers
- 2 Data Processing Programmers
- 2 Sales Representatives
- 1 Store Manager
- 1 Materials Control Supervisor
- 1 Production Manager

Five Service Occupations

- 4 Career Military Men
- 1 Policeman

Fourteen Skilled Occupations

- 3 Telephone Workers
- 1 Customer Engineer

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[12] Classifications are used following the arrangement in Dictionary of Occupational Titles (D.O.T.). U. S. Department of Labor, Dictionary of Occupational Titles, Washington, D. C.: Government Printing Office, 1949.

1 Inspector
1 Pipefitter
1 Turbine Tender
1 Gas Service Man
1 Baker
1 Mechanic
1 Steamfitter
1 Welder
1 Air Conditioning and Refrigeration Mechanic
1 Warehouseman

Seven Semi-Skilled Occupations

2 Machine Operators
2 Service Station Operators
1 Sheet Metal Worker
1 Production Worker
1 Oil Refinery Worker

No one reported coming from the unskilled trades or from the agricultural field.

For the most part these graduates returned to work in the community served by the junior college. Thirty-seven of forty-five (82.5 percent), responding to a question on where they were working, indicated employment in the county in which they went to college. Two (4.5 percent) were working within fifty miles of the college community; six (13 percent) were working over fifty miles away, of whom three were out of state. If the four career military men had not been included in this population, the percentage working locally would have been even higher.

As indicated in Table 7, these graduates tended to experience considerable financial advancement after completion of their junior college programs.

TABLE 7

Salaries Earned by Graduates Immediately After Graduation
Compared with Salaries Earned Three Years Later

Monthly Salary	Receiving This Amount Following Graduation		Receiving This Amount Three Years After Graduation	
	Number	Percent	Number	Percent
Up to $250	2	5.0	0	-
$250 - $299	0	-	0	-
$300 - $349	2	5.0	2	4.0
$350 - $399	3	8.0	0	-
$400 - $449	4	10.5	0	-
$450 - $499	4	10.5	3	6.0
$500 - $549	11	29.5	4	8.5
$550 - $599	4	10.5	3	6.0
$600 - $649	2	5.0	4	8.5
Over $650	6	16.0	32	67.0
Total	38*	100.0	48*	100.0

*Totals are not equal since not every returnee reported his salary in his work at graduation.

Considerable increase in pay over the three-year period seems to have been experienced by most of the graduates who returned to their old jobs. Although some of these increases may have been due to a general rise in wages in the state, it is possible that the training received at the junior college qualified the graduates for promotion and increases in salary. It is also likely that the type of person willing to put in the extra time and effort necessary to earn the A.A. degree is the type of employee who is promoted.

The graduates who were continuous in their employment were asked whether they had taken special training in the junior college which helped in the job they held three years after they had completed the A.A. degree. Twenty-seven (56 percent) reported "yes;" twenty-one (44 percent) said "no."

Asked to comment on how they liked various aspects of their employment, the majority of the occupational returnees reported general satisfaction with their jobs. The responses are listed in Table 8.

These graduates were also asked to comment on how satisfied they were with various aspects of the jobs they held three years after graduation. A tabulation of their responses is given in Table 9.

Except in the area of social status and prestige, approximately 80 percent of these graduates were satisfied with their work.

When asked "How satisfied are you with the advancement you have made in your field of work?" they replied as follows:

	N	%
Very well satisfied	21	43
Fairly satisfied	18	37
Indifferent	3	6
Dissatisfied	5	10
Very dissatisfied	2	4
	49	100

The graduates who found full-time positions for the first time after their junior college training held different kinds of jobs, had different experiences in these jobs, and had different reactions and feelings about their jobs.

TABLE 8

Job Satisfaction of Graduates Who Returned to Employment Held Before and/or During Attendance at Junior College

Area of Satisfaction		Like Very Much		Like Fairly Well		Dislike Slightly		Dislike Greatly		Not Applicable	
	N	N	%	N	%	N	%	N	%	N	%
The kind of work	49	32	65.5	10	20.0	5	10.0	2	45.0	0	-
The supervisors for whom they worked	48	24	50.0	19	40.0	3	6.0	0	-	2	4.0
The people with whom they worked	48	29	60.0	17	36.0	0	-	0	-	2	4.0
The people who worked for them	47	21	51.0	10	24.5	1	2.5	0	-	9	22.0
The income	48	18	37.5	19	39.5	7	14.5	4	8.5	0	-
The employer's promotion policy	48	21	43.5	10	21.0	4	8.5	9	18.5	4	8.5

TABLE 9

Job Satisfaction Three Years After Graduation Reported by the Graduates Who Returned to Work in Previously Held Positions

Area of Inquiry	Very Well Satisfied		Fairly Satisfied		Made No Difference		Dis-satisfied		Very dis-satisfied	
	N	%	N	%	N	%	N	%	N	%
1. Jobs where special abilities could be used	28	57.0	14	29.0	0	0	5	10.0	2	4.0
2. Jobs where good wages could be earned	20	41.0	20	41.0	2	4.0	5	10.0	2	4.0
3. Jobs which allowed for creativity and originality	22	46.0	16	33.0	0	0	6	12.5	4	8.5
4. Jobs with social status and prestige	15	31.0	11	23.0	13	27.0	6	12.5	3	6.5
5. Jobs with a secure future	32	65.5	13	26.5	1	2.0	3	6.0	0	0
6. Jobs relatively free from supervision	31	63.0	14	29.0	2	4.0	2	4.0	0	0
7. Jobs permitting the exercise of leadership	24	49.0	11	22.5	5	10.0	6	12.5	3	6.0
8. Jobs providing an opportunity to help others	25	53.5	12	25.5	4	8.5	5	10.5	1	2.0

THE NEW-TO-WORK GRADUATES

The graduates who entered employment after leaving junior college were of two types. Those in one group, called occupational returnees, knew what jobs they were going to have when they finished junior college because they had held the jobs while attending college, or had worked in them before. The other group, called new-to-work graduated, consisted of fifty students who found jobs after graduation which, for many, were to be the start of a full-time working career.

Some of these fifty graduates, when they were students, knew they were going to conclude their formal college education at the junior college. Some were latent terminal students and others had hoped to go on to further schooling. The fifty students had taken a variety of junior college programs, some of which were designed to train for specific employment; other programs provided general education, and still other programs had as their purpose preparation for transfer to a four-year college or university.

For purposes of comparison this population of fifty students was divided into two groups, one group consisting of graduates who were declared transfer students, the other of declared terminal students. The graduates were asked whether their junior college training had helped them with their work. Their replies revealed that some transfer and many terminal students had received junior college training which had prepared them for their job requirements. On the other hand, some transfer students and a few terminal students replied that they had received no training in junior college which prepared them for the work they did after graduating.

In the area of wages earned, the population was divided and compared both on the basis of whether the student was transfer or terminal and of whether he had received job-related training in college. For the other aspects of the graduates' employment, including type of job and job satisfaction, comparisons were made only on the basis of whether the students were in transfer or terminal programs as undergraduates.

These fifty graduates constituted approximately 18 percent of the respondents from the three colleges. It should be mentioned, however, that the junior college may be training many more of its students for employment than the 18 percent who actually complete programs. The employment of successful students (hire-outs) before completing the formal requirements of graduation was not considered in this study. Neither was an attempt made to determine how much credit for advancement should go to the college training received by the 22 percent of the graduates who also went to work, but at their old jobs.

The vocational training programs available at the junior colleges and the students who take these programs may influence and benefit students in other programs. It has not been established, however, and this study made no attempt to determine just what benefits come to students, and eventually to society, by having the four-year college or university-bound student associate for his first two years with students in the trades and other occupationally-oriented programs.

This research was intended as an exploratory step in identifying the working experiences of junior college graduates so that junior college personnel could better serve those students who go to work following graduation. That only 18 percent of the graduates fall in this category made the research no less important but simply provided a smaller number of graduates to study.

The conclusions drawn from this sample, therefore, have been limited. It is hoped that further research will follow this type of graduate, thereby providing additional information and more complete guidelines to those responsible for developing junior college curricula and counseling junior college students.

Description - Age, Grade Point Average, and Aptitude

The fifty alumni who found full-time employment for the first time after graduation consisted of thirty-one graduates who had been declared transfer students as undergraduates and nineteen who had been declared terminal students. The average terminal student as reported in Table 10 tended to be older than the transfer student. The older average age of the terminal students suggests that they either started college later, or were slower to complete college, than the declared transfer students. The terminal student also appeared to have less academic aptitude than the transfer student; nevertheless he earned grades which were as high as those earned by the transfer student.

TABLE 10

Average Age, Grade Point Average, and Aptitude of
the Graduates Who Found Full-Time Work
For the First Time

Characteristic	Total (N=50)	Transfer (N=31)	Terminal (N=19)
Average Age at Graduation	23.9	22.9	25.5
Average G.P.A.	2.19	2.18	2.19
Average Aptitude (Percentile)	43rd	48th	34th

This would indicate that those students who appeared to have limited chance of success in college based on their placement tests had found suitable programs and had succeeded.

Comparing these fifty graduates with the total population of junior college graduates shown in Table 4, it is apparent that the average new-to-work graduate is approximately a year younger, earns slightly poorer grades in junior college, and has an aptitude very similar to that of the total population.

As shown in Table 11, transfer students majored in every field except the trades. Terminal students, on the other hand, reported they had majored only in business, general studies, electronics, engineering and architecture, or the trades. Exdept for general studies each of these training fields is directly related to an employment field.

Work Experiences

Place of Employment. As reported in Table 12, most of the junior college graduates found their initial jobs in the local community or within fifty miles of their junior college, and most of them after three years were still working in the college area.

Types of Occupations. The classifications and organization used in the Dictionary of Occupational Titles (D.O.T.)[13] served as the model for organizing the types of work reported by the graduates. These classifications were chosen because they bear some relationship to skills and training, and the system is in fairly common use, particularly by the census and employment services.

TABLE 11

Subject-Matter Majors of the Graduates Who Found Full-Time Work for the First Time

Majors	Total		Transfer		Terminal	
	N	%	N	%	N	%
Business	16	32.0	10	32.5	6	31.0
General Studies	12	24.0	9	29.0	3	16.0
Electronics	6	12.0	1	3.0	5	26.5
Engineering-Architecture	5	10.0	3	10.0	2	10.5
Trades	3	6.0	0	- -	3	16.0
Humanities	3	6.0	3	10.0	-	- -
Art-Music-Drama	2	4.0	2	6.5	-	- -
Social Sciences	1	2.0	1	3.0	-	- -
Mathematics - Science	1	2.0	1	3.0	-	- -
Physical Education	1	2.0	1	3.0	-	- -
Total	50	100.0	31	100.0	19	100.0

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[13] Dictionary of Occupational Titles, Washington, D. C.: U. S. Government Printing Office, 1949.

TABLE 12

Place of Work of the Graduates Who Found Full-Time Work for the First Time

Immediately Following Graduation

Place Worked	Total		Transfer		Terminal	
	N	%	N	%	N	%
Local	37	77.0	24	80.0	13	72.0
Within 50 miles of junior college	7	14.5	4	13.5	3	17.0
In California over 50 miles from junior college	3	6.5	2	6.5	1	5.5
Out of state	1	2.0	--	--	1	5.5
Total	48	100.0	30	100.0	18	100.0

Three Years Following Graduation

Place Worked	Total		Transfer		Terminal	
	N	%	N	%	N	%
Local	37	75.5	24	77.5	13	72.0
Within 50 miles of junior college	7	14.5	4	13.0	3	17.0
In California over 50 miles from junior college	4	8.0	3	9.5	1	5.5
Out of state	1	2.0	- -	- -	1	5.5
Total	49	100.0	31	100.0	18	100.0

Usefulness of Junior College Training in Preparing Graduates for Work

As shown in Table 13 most of the graduates considered that their junior college training had been useful or very useful in preparing for work. No one reported his college experience had been a disadvantage although 25 percent indicated that the training had not made any difference in preparing them for their jobs. A smaller percentage of terminal students than of transfer students considered that the junior college training had made no difference. As could be expected, a larger percentage of terminal students than of transfer students indicated that their college training had been very useful.

TABLE 13

Usefulness of Junior College Training in Preparing Graduates for Work

Comment	Total		Transfer		Terminal	
	N	%	N	%	N	%
Very useful	18	37.5	10	32.0	8	47.0
Useful	18	37.5	12	39.0	6	35.0
No Difference	12	25.0	9	29.0	3	18.0
Disadvantage	--	--	--	--	--	--
Total	48	100.0	31	100.0	17	100.0

Table 14 reports the graduates' estimates of the usefulness of the junior college training as it helped in placement, in keeping the job, and in promotions. The terminal students consistently gave more credit to their junior college training than did the transfer students. Approximately half of the transfer students and approximately a fourth of the terminal students reported their college training had made no difference in securing a job, keeping the job, or being promoted.

TABLE 14

Usefulness of Junior College Training in Certain Aspects of the Employment Taken by the New-to-Work Graduates

Aspect of Employment and Usefulness	Total		Transfer		Terminal	
Placement in the Position	N	%	N	%	N	%
Very useful	17	37.0	9	31.0	8	47.0
Useful	10	21.5	6	20.5	4	23.5
Made no difference	19	41.5	14	48.5	5	29.5
Disadvantage	--	--	--	--	--	--
Total	46	100.0	29	100.0	17	100.0
Keeping the Position	N	%	N	%	N	%
Very useful	8	17.0	3	10.0	5	29.5
Useful	21	44.5	12	40.0	9	53.0
Made no difference	18	38.5	15	50.0	3	17.5
Disadvantage	--	--	--	--	--	--
Total	47	100.0	30	100.0	17	100.0
Promotion on the Job	N	%	N	%	N	%
Very useful	13	28.5	7	23.5	6	37.5
Useful	13	28.5	7	23.5	6	37.5
Made no difference	20	43.0	16	53.0	4	25.0
Disadvantage	--	--	--	--	--	--
Total	46	100.00	30	100.0	16	100.0

Two graduates did not report whether their junior college training had helped them in their first jobs. One of these was a business major who took a job as an encyclopedia salesman after he graduated and three years later was an operator in an oil refinery. The other graduate had majored in auto shop and found employment as a body and fender mechanic. The employment found by the other forty-eight new-to-work graduates ranged from deliveryman to mechanical engineer. The hobs held by the graduates who reported that their junior college training had helped them are listed in Table 15.

Table 15 indicates that graduates who majored in the fields of business and electronics constituted over half of those who were able fo find positions related to their college training. Two alumni had shifted their fields of work considerably three years after graduating but the majority of this population remained in the same general field of work for the three year period.

TABLE 15

Jobs Held Related to College Majors of the New-to-Work Graduates Who Indicated Their Junior College Training Had Helped Prepare Them for Their First Jobs

Major When in Junior College	First Job Held After Graduation	Job Held Three Years After Graduation
	Professional and Managerial (9)	
Accounting	Accounting Clerk	Accountant
Business	Accounting Clerk	Foreclosure Supervisor
Business	Accounting Clerk	Programmer
Engineering	Engineering Aide	Engineering Technician
Engineering	Engineering Aide	Engineering Estimator
Engineering	Transitman	Transitman
Drafting	Junior Draftsman	Junior Draftsman
General Studies	Mechanical Engineer	Mechanical Engineer
General Studies	Planner and Estimator	Maintenance Scheduler
	Clerical and Sales (8)	
Business	Office Machine Operator	Baggageman*
Business	Supervising Clerk	Teller
Business	Assistant Bookstore Mgr	Accountant
Business	Management Trainee	Department Manager
Business	Sales Representative	Sales Supervisor
Business	Shoe Sales Clerk	Sheet Rock Finisher*
Journalism	Sales Assistant	Sales Assistant
General Studies	Salesman	Salesman
	Skilled (5)	
Electronics	Transmissionman	Chief Transmissionman
Electronics	IBM Repairman	IBM Repairman
Electronics	Hearing Aid Repairman	Oil Processing Operator*
Electricity	Electrician	Electrician
Carpentry	Carpenter	Carpenter
	Semi-Skilled (2)	
Electronics	Electronics Technician	Engineering Aide
Electronics	Electronics Technician	Electronics Technician

*Occupations unrelated to first position held after graduation.

Table 16 lists the many different kinds of employment found by the graduates who reported the training they had received in junior college had not helped them in their jobs. A comparison of the number of graduates who shifted fields, shown in Tables 15 and 16 would indicate that those graduates who had received training in junior college related to their work were more likely to stay in their fields than those without job-related junior college training.

As shown in Table 17, most of the terminal students in this study knew the kind of employment they wanted and would seek after graduation. These graduates located positions which used their college training. In contrast, two-thirds of the transfer students took jobs after graduation which had not been in their plans when attending college and for which their college programs had not prepared them. The transfer students were almost evenly divided on whether they found the job they wanted right after graduation or not. Three years after graduation more of the transfer students (71 percent) were working in the jobs they wanted. As shown in Table 18, the terminal students still reported 83.5 percent working in the jobs they wanted.

Comparison of Tables 17 and 18, shows that after three years there was no noticeable change in the percentage of transfer students who were working in jobs they had trained for in junior college and had planned on finding after graduation. The terminal students, however, were moving out of the positions they had planned on finding and had trained for in junior college. The fact that they were moving into fields for which they had not prepared in junior college suggests that on-the-job experience was developing new interests and abilities among these graduates.

TABLE 16

Jobs Held Related to College Majors of the New-to-Work Graduates Who Indicated Their Junior College Training Had Not Prepared Them for Their First Jobs

Major When in Junior College	First Job Held After Graduation	Job Held Three Years After Graduation
Professional and Managerial (2)		
Accounting	Group Leader	Assistant Supervisor*
Business	Apprentice Mortician	Apprentice Mortician
Clerical and Sales (8)		
Business	Grocery Clerk	Grocery Clerk
Business	Grocery Store Manager	Grocery Store Manager
Business	Office Work	Office Work
General Studies	Bookkeeper	Loan Interviewer
General Studies	Stationery Clerk	Asbestos Worker*
General Studies	Stock Clerk	Concrete Driller*
English	Retail Sales	Manager
Recreation	Clerk	Sales Adjuster
Service Occupations (2)		
Business	Dice Dealer Trainee	Dice Dealer
Social Sciences	Bartender	Office Manager*
Agriculture (1)		
Art	Vineyard Manager	Vineyard Manager
Skilled (5)		
General Studies	Asphalt Plant Operator	Shipping Clerk*
General Studies	Quality Control	Quality Control Engineer
General Studies	Warehouse Worker	Sales Representative*
Social Sciences	Warehouseman	Salesman*
Engineering	General Construction	Quality Control
Semi-Skilled (6)		
General Studies	Oil Pumper	Oil Gauger
General Studies	Dispensing Optician	Dispensing Optician
English	Truck Driver	Writer*
Biological Sciences	Tireman	Tireman
Art	Route Milkman	Dock Milkman
Electronics	Instrument Helper	Electronics Apprentice

*Occupations unrelated to first position held after graduation.

TABLE 17

Attitude Toward and Preparation for Type of Employment Taken by the New-to-Work Graduates

The Job Found After Graduation Was the Job Wanted at the Time

Responses	Total		Transfer		Terminal	
	N	%	N	%	N	%
Yes	28	58.0	13	43.0	15	83.5
No	15	31.5	12	40.5	3	16.5
Not sure	5	10.5	5	16.5	--	--
Total	48	100.0	30	100.0	18	100.0

The Graduate Had Planned on Getting Such a Job When in Junior College

Responses	Total		Transfer		Terminal	
	N	%	N	%	N	%
Yes	20	42.5	8	27.0	12	70.5
No	22	46.5	20	66.5	2	12.0
Not sure	5	11.0	2	6.5	3	17.5
Total	47	100.0	30	100.0	17*	100.0

The Graduate Took Special Training in Junior College for Such a Job

Responses	Total		Transfer		Terminal	
	N	%	N	%	N	%
Yes	24	50.0	10	33.0	14	78.0
No	24	50.0	20	67.0	4	22.0
	48	100.0	30	100.0	18	100.0

*One terminal student did not answer this question.

TABLE 18

Attitude Toward and Preparation for Type of Employment Held Three Years After Graduation by the New-to-Work Graduates

The job held three years after graduation was the job wanted at the time:

Responses	Total N	Total %	Transfer N	Transfer %	Terminal N	Terminal %
Yes	37	75.5	22	71.0	15	83.5
No	7	14.5	5	16.0	2	11.0
Not sure	5	10.0	4	13.0	1	5.5
	49	100.0	31	100.0	18	100.0

The graduate had planned on getting such a job when in junior college:

Responses	Total N	Total %	Transfer N	Transfer %	Terminal N	Terminal %
Yes	16	32.5	8	26.0	8	44.5
No	30	61.5	22	71.0	8	44.5
Not sure	3	6.0	1	3.0	2	11.0
	49	100.0	31	100.0	18	100.0

The graduate took special training in junior college for such a job:

Responses	Total N	Total %	Transfer N	Transfer %	Terminal N	Terminal %
Yes	19	39.5	10	33.0	9	50.0
No	29	60.5	20	67.0	9	50.0
	48	100.0	30*	100.0	18	100.0

*One transfer student did not answer this question

TABLE 19

Amount of Experience Beyond Junior College Necessary for First Jobs Taken After Graduation by the New-to-Work Graduates

Amount of Additional Experience	Total N	Total %	Transfer N	Transfer %	Terminal N	Terminal %
None	22	46.0	13	43.5	9	50.0
Less than one month	3	6.0	3	10.0	0	0
1 - 3 months	7	14.5	5	16.5	2	11.0
3 - 6 months	8	17.0	4	13.0	4	22.0
6 - 12 months	2	4.0	1	3.5	1	6.0
1 - 2 years	1	2.0	1	3.5	0	0
Over 2 years	5	10.5	3	10.0	2	11.0
Total	48	100.0	30	100.0	18	100.0

TABLE 20

Amount of Responsibility in First Jobs Taken After Graduation by the New-to-Work Graduates

Amount of Responsibility	Total N	Total %	Transfer N	Transfer %	Terminal N	Terminal %
Closely supervised	8	17.5	4	14.0	4	22.0
Supervised in part	17	37.0	10	36.0	7	39.0
Given assignments but not supervised	12	26.0	6	21.5	6	33.0
Supervised others	6	13.0	5	18.0	1	6.0
Major responsibility to supervise	3	6.5	3	10.5	0	0
Total	46	100.0	28	100.0	18	100.0

TABLE 21

Amount of Experience Beyond Junior College Necessary for Jobs Held Three Years After Graduation by New-to-Work Graduates

Amount of Additional Experience	Total N	Total %	Transfer N	Transfer %	Terminal N	Terminal %
None	9	19.5	6	20.5	3	17.5
Less than one month	0	--	0	--	0	--
One to 3 months	5	11.0	4	14.0	1	6.0
3 - 6 months	7	15.0	3	10.5	4	23.5
6- 12 months	5	11.0	3	10.5	2	12.0
1 - 2 years	9	19.5	7	24.0	2	12.0
Over 2 years	11	24.0	6	20.5	5	29.0
Total	46	100.0	29	100.0	17	100.0

TABLE 22

Amount of Responsibility in Jobs Held Three Years After Graduation by New-to-Work Graduates

Amount of Responsibility	Total N	Total %	Transfer N	Transfer %	Terminal N	Terminal %
Closely supervised	0	--	0	--	0	--
Supervised in part	13	28.5	6	21.0	7	39.0
Given assignments but not supervised	14	30.0	10	36.0	4	22.0
Supervise others part of the time	8	17.5	5	18.0	3	17.0
Major responsibility for supervising others	11	24.0	7	25.0	4	22.0
Total	46	100.0	28	100.0	18	100.0

Level of Work and Responsibility

The amount of experience necessary to succeed in the job is reported in Table 19. It appears from the responses of graduates that half the jobs taken immediately after graduation were of a level requiring no additional experience beyond the junior college training. Half the graduates reported they started in positions requiring experience beyond the training received at junior college. Most of these graduates indicated that six additional months of training or less was sufficient to make them qualified for the work they were expected to do, although five of them, as reported in Table 19, believed the position they accepted after graduation was at a level requiring over two years of experience beyond the junior college training.

Table 20 reports the amount of responsibility in the first jobs held by the graduates. It would appear that transfer students had more responsibility for supervision than did terminal students and, conversely, terminal students were more likely to be supervised than transfer students.

As shown in Tables 21 and 22, three years later the level of work in which the graduates were employed required more experience, which suggests that they were progressing on the job. In the first job taken the transfer students tended to be given more responsibility for supervising others than the terminal students were given. Three years later the degree of responsibility in the job was almost the same for both.

Pay

Wages earned by the new-to-work graduates in the first jobs held after graduation ranged from less than $250 per month to over $650 per month. The graduates from terminal programs tended to earn more per month than the graduates from the transfer programs, as indicated in Table 23.

TABLE 23

Wages Earned by the New-to-Work Graduates in the First Jobs Held After Graduation

Amount Earned per Month	Total		Transfer		Terminal	
	N	%	N	%	N	%
Less than $250	2	4.5	1	3.5	1	5.5
$250 - $299	5	10.5	4	14.0	1	5.5
$300 - $349	8	17.0	6	20.5	2	11.0
$350 - $399	8	17.0	4	14.0	4	22.5
$400 - $449	9	19.0	5	17.0	4	22.5
$450 - $499	4	8.5	3	10.0	1	5.5
$500 - $549	2	4.5	1	3.5	1	5.5
$550 - $599	3	6.5	2	7.0	1	5.5
$600 - $649	1	2.0	1	3.5	0	
$650 and over	5	10.5	2	7.0	3	16.5
Total	47	100.0	29	100.0	18	100.0

Some graduates from each program were able to find a starting job at over $650 per month, and one graduate from each program earned less than $250 per month.

Three months after graduation this population had moved ahead in earnings, as revealed in Table 24, and the transfer students seemed nearly to have caught up in wages to parallel the earnings of the terminal students. The transfer student's earnings in the three-year period had increased on the average more than the terminal student's. Had this study been continued for a longer period, it might have been possible to determine whether the salaries

TABLE 24

Wages Earned by the New-to-Work Graduates in the Jobs Held Three Years After Graduation

Amount Earned Per Month	Total N	Total %	Transfer N	Transfer %	Terminal N	Terminal %
Less than $250	--	--	--	--	--	--
$250 - $299	1	2.0	--	--	1	5.5
$300 - $345	1	2.0	1	3.5	--	--
$350 - $399	2	4.5	2	7.0	--	--
$400 - $449	3	6.5	2	7.0	1	5.5
$450 - $499	4	8.5	2	7.0	2	11.0
$500 - $549	10	21.0	7	24.0	3	16.5
$550 - $599	8	17.0	5	17.0	3	16.5
$600 - $649	7	15.0	4	14.0	3	16.5
$650 and over	11	23.5	6	20.5	5	28.5
	47	100.0	29	100.0	18	100.0

of the transfer students continued to increase more rapidly than those of the terminal students, or whether both groups progressed at the same rate once they became nearly equal.

If, instead of dividing the exploratory work population on the basis of whether a transfer or a terminal program was chosen, the population is divided on the basis of whether the student took special training in junior college which helped in preparing him for his job, the salary advantage for the trained students becomes apparent. The students who indicated that they had taken special training in junior college for their jobs came from both transfer and terminal programs. Table 25 reports the division of this population on the basis of transfer and terminal programs as well as special training taken or not taken. Table 26 reveals this same division of population but for the job held three years after graduation. A comparison of these two tables indicates that the terminal students were shifting from the fields in which they had taken their junior college training.

The graduate who reported that he had taken courses in college which had prepared him for his first position tended to start work at about fifty dollars more per month than his classmate who had not taken special training.

TABLE 25

Comparison of New-to-Work Graduates from Transfer and Terminal Programs Who Had Taken Special Training for First Jobs Held After Graduation

	Transfer	Terminal	Total
Took special training in junior college preparing for job	10	12	24
No special junior college training taken suitable for job	20	4	24
Total	30	18	

TABLE 26

Comparison of New-to-Work Graduates from Transfer and Terminal Programs Who Had Taken Special Training for Jobs Held Three Years After Graduation

	Transfer	Terminal	Total
Took special training in junior college preparing for job	10	9	19
No special junior college training taken suitable for job	20	9	29
Total	30	18	

In Table 27 a comparison of wages received by these two groups is shown. The salary placement puts the trained graduate consistently one step ahead.

TABLE 27

Comparison of Wages Earned by Trained and Untrained New-to-Work Graduates in First Jobs Held After Graduation

Salary Per Month	Total		Trained		Untrained	
	N	%	N	%	N	%
Less than $250	2	4.0	0	0	2	8.5
$250 - $299	5	10.5	2	8.5	3	12.5
$300 - $349	8	17.0	3	12.5	5	21.0
$350 - $399	8	17.0	6	25.0	2	8.5
$400 - $449	10	21.0	3	12.5	7	29.0
$450 - $499	4	8.0	3	12.5	1	4.0
$500 - $549	2	4.0	1	4.0	1	4.0
$550 - $599	3	6.0	2	8.5	1	4.0
$600 - $ 649	1	2.0	1	4.0	0	0
Over $650	5	10.5	3	12.5	2	8.5
	48	100.0	24	100.0	24	100

In Table 28 the same comparison is made between the trained and untrained graduate. Students who reported taking special training in junior college were still a fifty-dollar step or more ahead of the untrained student except for a group of students (27 percent) who reached the maximum classification (over $650) established for this study.

TABLE 28

Comparison of Wages Earned by Specially Trained and Untrained New-to-Work Graduates in the Jobs Held Three Years After Graduation

Salary Per Month	Total		Trained		Untrained	
	N	%	N	%	N	%
Less than $250	--	--	--	--	--	--
$250 - $299	1	2.0	--	--	1	3.5
$300 - $349	1	2.0	--	--	1	3.5
$350 - $399	2	4.0	--	--	2	7.0
$400 - $449	3	6.0	1	5.0	2	7.0
$450 - $499	4	8.5	2	10.5	2	7.0
$500 - $549	11	23.0	3	16.0	8	27.5
$550 - $599	8	16.5	6	31.5	2	7.0
$600 - $649	7	15.0	4	21.0	3	10.0
Over $650	11	23.0	3	16.0	8	27.5
	48	100.0	19	100.0	29	100.0

Job Satisfaction

Satisfaction with work is a value judgment based on the sum of many aspects of a job. Individuals vary in what they consider important in achieving satisfaction. One person may be well satisfied with his work despite low wages and poor working conditions because the work he does permits him to achieve satisfaction in ways more important to him than salary or working conditions. In an effort to establish the degree of job satisfaction, inquiries were made into various aspects of the alumni's work three years after graduation.

TABLE 29

Degree of Satisfaction with Their Work Expressed by the New-to-Work Graduates Three Years After Graduation

Satisfaction with Kind of Work Done

Amount	Total N	Total %	Transfer N	Transfer %	Terminal N	Terminal %
Like very much	26	54.5	16	53.5	10	55.5
Like fairly well	17	35.5	9	30.0	8	44.5
Dislike slightly	3	6.0	3	10.0	0	
Dislike greatly	2	4.0	2	6.5	0	
Total	48	100.0	30	100.0	18	100.0

Satisfaction with the Work As It Provides Social Status and Prestige

Amount	Total N	Total %	Transfer N	Transfer %	Terminal N	Terminal %
Very well satisfied	10	20.5	4	13.0	6	33.0
Fairly satisfied	17	35.0	11	35.5	6	33.0
Makes no difference	16	32.5	12	39.0	4	23.0
Dissatisfied	2	4.0	1	3.0	1	5.5
Very dissatisfied	4	8.0	3	9.5	1	5.5
Total	49	100.0	31	100.0	18	100.0

Questionnaire Responses Three Years After Graduation

Table 29 reports satisfaction with the kind of work done and the social status and prestige of the work. All the terminal students reported they liked the kind of work they were doing. Most of the transfer students (83.5 percent) liked the kind of work they were doing but some (16.5 percent) of this group expressed dissatisfaction. In the area of social status and prestige some of the graduates from both transfer and terminal programs expressed a degree of dissatisfaction. More terminal than transfer students were well satisfied with the social status and prestige of their work. More of the transfer students reported that social status and prestige made no difference to them.

In the area of personal contacts better than 80 percent of the graduates expressed satisfaction with their work. Table 30 reports various aspects of personal relationships on the job. The transfer students reported stronger likes and dislikes of supervisors than did the terminal students.

When asked about their co-workers, all respondents reported they liked them very much or fairly well.

TABLE 30

Degree of Satisfaction wiyh Personal Relationships in Their Jobs
Expressed by the New-to-Work Graduates Three Years After Graduation

Satisfaction with Supervisors

	Total		Transfer		Terminal	
Amount	N	%	N	%	N	%
Like very much	22	46.0	15	50.0	7	39.0
Like fairly well	19	39.5	10	33.0	9	50.0
Dislike slightly	4	8.5	3	10.0	1	5.5
Dislike greatly	1	2.0	1	3.5	0	--
Not applicable	2	4.0	1	3.5	1	5.5
	48	100.0	30	100.0	18	100.0

Satisfaction with Co-workers

	Total		Transfer		Terminal	
Amount	N	%	N	%	N	%
Like very much	24	49.0	16	52.0	8	44.5
Like fairly well	24	49.0	14	45.0	10	55.5
Dislike slightly	0	--	0	--	0	--
Dislike greatly	0	--	0	--	0	--
Not applicable	1	2.0	1	3.0	0	--
	49	100.0	31	100.0	18	100.0

In the area of wages and job security, over 75 percent of the graduates in this study were satisfied. Table 31 reports that 76.5 percent of the transfer students liked their wages very much or fairly well while 83.5 percent of the terminal students were of this opinion. However, only one graduate (5.5 percent) of the terminal program liked his wage very much while 26.5 percent of the transfer students liked their wages very much. Unlike the area of personal relationships with co-workers, the area of wages earned received some expression of dissatisfaction.

TABLE 31

Degree of Satisfaction with Wages and Job Security Expressed by the New-to-Work Graduates Three Years After Graduation

Satisfaction with Wages Earned

	Total		Transfer		Terminal	
Amount	N	%	N	%	N	%
Like very much	9	19.0	8	26.5	1	5.5
Like fairly well	29	60.5	15	50.0	14	78.0
Dislike slightly	7	14.5	6	20.0	1	5.5
Dislike greatly	3	6.0	1	3.5	2	11.0
	48	100.0	30	100.0	18	100.0

Satisfaction with the Job as a Position with a Secure Future

	Total		Transfer		Terminal	
Amount	N	%	N	%	N	%
Very well satisfied	24	49.0	16	52.0	8	44.5
Fairly satisfied	14	28.5	8	25.5	6	33.5
Makes no difference	7	14.5	5	16.0	2	11.0
Dissatisfied	3	6.0	2	6.5	1	5.5
Very dissatisfied	1	2.0	0		1	5.5
	49	100.0	31	100.0	18	100.0

In the area of job security, transfer and terminal students varied in the degree of satisfaction expressed, but approximately the same percentage (77 percent) of both groups were satisfied with the security they had in the positions they held three years after graduation.

Interview Responses Four Years After Graduation

In the summer of 1965 personal interviews were sought with all the first-time continuously employed graduates who could be found still working in the San Francisco Bay Area. Twenty-eight of the fifty graduates were located and were willing to discuss their present employment and junior college experiences. The personal interview made it possible to check on the accuracy of the answers given on the questionnaire. In addition, it was possible to explore in depth the graduate's attitude toward his junior college training as it related to his success in his work.

The graduates who agreed to participate in the interview were most cooperative and answered all questions unhesitatingly. Their responses when compared to their questionnaire responses suggested that on the original questionnaire they had accurately reported the jobs held, the level of work done, the amount of responsibility in their jobs, the degree of job satisfaction, and the reasons for their satisfaction.

Twenty-six of the graduates reported that they were still working at the same job, or had been promoted within the same company. Two of the graduates had new positions but when speaking of their former work gave answers consistent with the information reported in their questionnaires.

As reported earlier, most of these graduates in their responses on the questionnaires had indicated satisfaction with their work and the progress they had made on the job. The personal interviews revealed that the graduates for the most part still felt the same way about their work and their progress on the job, although some were in the process of changing and re-evaluating their opinions about their work. No pattern of change was apparent. Some who had reported dissatisfaction on the questionnaire, a year later spoke of the pleasure in their work and how their attitudes had been changing gradually. Others who had been satisfied with their work a year earlier were now concerned over their future in the company and were gradually changing their attitudes to one of dissatisfaction.

The consistency and changing attitude between the questionnaire and the interview in terms of job satisfaction was as follows:

Twenty held a consistent attitude.

19 indicated satisfaction both in the questionnaire and in the interview.

1 indicated dissatisfaction both in the questionnaire and in the interview.

Six reported a changing attitude.

4 were satisfied in the questionnaire but becoming dissatisfied.

2 were dissatisfied in the questionnaire but becoming satisfied.

Two respondents did not answer this section.

The consistency and changing attitude toward progress made on the job between the questionnaire and the interview was as follows:

Twenty held consistent attitudes.

19 indicated satisfaction both in the questionnaire and in the interview.

1 indicated dissatisfaction both in the questionnaire and in the interview.

Five reported a gradually changing attitude.

3 indicated satisfaction in the questionnaire but they were becoming dissatisfied as reported in the interview.

2 were dissatisfied in the questionnaire but they were becoming satisfied as reported in the interview.

Three respondents did not reply to this section.

For most of the graduates the value structure as it related to their work remained the same. Seventeen of the graduates when reporting areas of satisfaction or dissatisfaction in connection with their work suggested that the areas important in the questionnaire were still important at the time of the interview. For example, a graduate who on the questionnaire had indicated general job satisfaction because of the pay received, because of the type of work done, and because of his co-workers, in the interview would refer to these same areas when speaking of his general satisfaction with his job. Three of the graduates, however, used different criteria for indicating their job satisfaction. In eight of the interviews the answers of graduates were such that it was not possible to determine whether they held the same or different values. It appeared to the investigator after comparing answers taken in personal interviews with answers returned on a questionnaire that these graduates had been honest and accurate in completing the questionnaire.

The interviews also suggested that job satisfaction was a dynamic and changing thing. No attempt was made in this study to trace the course of such changing attitudes. It was deemed sufficient to report that such changes did take place, but for the purposes of this study the attitudes of alumni toward their jobs were reported only at a moment in time when they filled out the questionnaire three years after they had graduated, and at another moment in time when they were interviewed four years after graduation.

Based on the personal interviews conducted with twenty-eight alumni four years after graduation, it was estimated that about 80 percent of this group were satisfied with the work they were doing. Each person was asked how satisfied he was with his work and why. The responses and reasons are shown in Table 32.

TABLE 32

Reasons for Job Satisfaction Reported by the New-to-Work Graduates

Reasons for Responses	Very Satisfied	Fairly Satisfied	Indifferent	Very Dissatisfied
Challenge of job	4	1	1 (no challenge)	
Kind of Work	2	5	1	
Everything about job	1			
Status of job	1	1		
Being able to help people	1			
Being able to attend college concurrently	1			
Pay		1	1	
Security		1		
Associates		1		1 (uneducated associates)
"Stepping-Stone" experience		1		
Supervisor		1		
Monotonous			1	
Total responding	10	12	4	1

Recent job change and insufficient experience to answer - 1

As an additional check on job satisfaction, inquiry was made into the feelings of the wife toward the graduate's employment; also it was desired to know whether the graduate was considering changing his field of work. Answers tended for the most part to parallel closely the general job satisfaction reported. Comparison of the attitudes of the wives and the graduates was as follows:

Both satisfied	18
Graduate satisfied, wife not satisfied	2
Graduate indifferent, wife satisfied	3
Graduate indifferent, wife dissatisfied	1
Both dissatisfied	1
Response not applicable	3

Twenty-three of the twenty-eight graduates interviewed were planning to continue in the same field of work. Two were undecided whether they would change fields or remain, and four hoped to switch fields at some later time. Only one was actually taking courses in preparation for the change, and he planned to change from management to recreation work. One was hoping to change from auto repairs to electronics, one from credit collection to the ministry, and the fourth from an oil gauger to law, but none of these graduates had made any real effort to become qualified for the new fields.

Junior College Experiences as Related to Employment

In the interview an attempt was made to gather information which would relate junior college experiences to the employment of these graduates. The interviewer probed in the areas of course work, instructor contacts, and co-curricular activities, and tried to establish the ways these experiences might have contributed to success on the job.

Responses were varied, ranging from two which indicated no recollection of any junior college experiences having any relationship to current employment, to one which said the respondent attributed his present job directly to the junior college training received, to the help of counselors, and to the instructors' encouragement.

The twenty-six respondents who did relate their junior college training to their current employment spoke of the ways their training had helped them and which part of the junior college experience had been most responsible as follows:

Twelve references were made to usable skills acquired at the college in these contacts:

3 in business classes
2 in trade classes
1 in an electronics class
1 in a metallurgy class
1 in an accounting class
1 in technical courses
1 in mathematics classes and electronics laboratories
1 in mathematics, surveying and drafting classes
1 from an electronics instructor.

Ten references were made to learning to deal with people from the following junior college experiences:

2 from classes in general
2 from psychology classes
1 from Spanish and English classes
1 from business classes
1 from general campus contacts
1 from student government
1 from club activities
1 from social activities.

Nine references were made to general knowledge acquired from the following sources:

4 from the total program
1 from the electronics courses
1 from business and English courses
1 from a chemistry course
1 from a humanities course
1 from an architecture course.

Three references were made to useful contacts made in college through the following:

2 from club activities
1 from a trade instructor.

Two references were made to how an instructor had helped them as students to gain self-confidence:

1 was a public speaking instructor
1 was an electronics instructor.

Two referred to the advantage of just being able to read as something they gained from college.

One individual indicated that his club activity in college had helped him to communicate.

One individual indicated that simply because he had graduated from the business program at the junior college he was able to get started in a job.

Fifteen of those interviewed indicated that they were employed in the field they had trained for in junior college; thirteen stated that they were not working in a field for which their junior college had trained them.

Counselling and Guidance as Related to Career Choices

The interview also probed in the area of counselling and guidance. Not all the graduates interviewed were willing to state their opinions of how much counseling and guidance a student should receive in the matter of career choice. All of them, however, recalled the amount of assistance given to them by counselors. Most of the graduates interviewed felt they had received less help than they would like to have had. One graduate was of the opinion that he and many of his classmates were unprepared for counseling when in junior college and did not know enough to seek or accept counseling. Another graduate believed the counselors did not know enough about occupations to help the students in this area. The responses received are reported in Table 33.

TABLE 33

Responses of Graduates Concerning Desirable Amount of Counseling and Guidance Compared with That Given in Vocational-Choice Assistance to Junior College Students

Amount of Guidance	Amount of Career Guidance Proper at a Junior College N	%	Amount of Career Guidance Actually Received N	%
None	0	--	11	39.5
Small amount	3	11.0	5	18.0
Medium amount	11	39.5	8	28.5
Above average	6	21.0	4	14.0
A great deal	--	--	--	--
No response	8	28.5	--	--
	28	100.0	28	100.0

Approximately half of these graduates reported that when they were students they received help and guidance about appropriate careers from counselors and instructors; on the other hand, half of the graduates had made their own choices without help from any individual at the college. In answer to the question, "If you got counseling in career choice, where did it come from?" graduates responded as follows:

14 made their own choices unassisted
6 credited a counselor with assistance
6 credited instructors with assistance
1 credited both a counselor and an instructor
1 reported a businessman of his acquaintance had helped.

During the interview the graduate was asked whether he would have been as well off as far as his occupation was concerned if he had not been permitted to take the transfer or the terminal program he chose as a junior college student. No one answered that he would have been better off had he been forced into the other program. Approximately half of them felt they would have been as well off regardless of which program they had taken, and nearly half felt they would have benefited less had they taken the other program. The transfer students were inclined to believe that terminal programs, had they taken them, would not have benefited their careers as much, whereas terminal students tended more often to believe that had they taken the transfer program instead, the benefits to their working careers would have been as great. A comparison of the responses on this subject are shown in Table 34.

Asked whether they would have stayed in junior college had the transfer or the terminal program they chose not been available to them, eleven graduates answered that they would have stayed, eleven said they would not have remained in college. The transfer student appeared to be more dedicated to his own program, and the terminal student in retrospect seemed to be more willing to accept the other program. Table 35 reports the answers received from the graduates interviewed.

The transfer student was stronger in his conviction than the terminal student that the other program would not have benefited him as much had he taken it. The transfer student also would have been more likely to discontinue his college work than the terminal student if forced to take the other program. However, when reporting on the contribution of the junior college to occupational success, the terminal student tended to give more credit to the college than the transfer student did. Although one transfer student was the only individual to give the junior college all the credit for his occupational success, the majority of transfer students gave very little and moderate credit to the part the junior college played in their occupational success; most of the terminal students gave moderate and a great deal of credit to the college. The complete responses of those interviewed is shown in Table 36.

One of the respondents answered that because of the liberal policy at the junior college and the fact that the instructors did not try to "flunk him out," he had attained some success and developed the confidence he needed to succeed in his work.

TABLE 34

Estimates by Those Interviewed of the Benefits to Be Derived from Taking the Other Program - Transfer or Terminal - Than the One Taken in Junior College

Estimates by Graduates Interviewed	Total		Transfer Student If He Had Taken Terminal		Terminal Student If He Had Taken Transfer	
	N	%	N	%	N	%
Less benefits	12	43.0	8	50.0	4	33.0
As much benefits	13	46.0	7	44.0	6	50.0
More benefit	0	--	0	--	0	--
Not sure	2	7.5	1	6.0	1	8.5
No response	1	3.5	0	--	1	8.5
	28	100.0	16	100.0	12	100.0

TABLE 35

Opinions of Graduates Interviewed Concerning Whether They Would Have Stayed in College Had They Not Been Permitted to Take the Programs They Did

Would Graduate Have Stayed in Junior College if He Could Not Have Taken the Program he Took?	Total		Transfer Student If He Had Been Required to Take a Terminal Program		Terminal Student if He Had Been Required to Take the Transfer Program	
	N	%	N	%	N	%
Yes	11	39.0	6	37.5	5	42.5
No	11	39.0	8	50.0	3	25.0
Not sure	4	14.5	2	12.5	2	16.5
No response	2	7.5	--	--	2	16.5
	28	100.0	16	100.0	12	100.0

TABLE 36

Amount of Job Success Attributed by Graduates to Junior College Training When Interviewed Four Years After Graduating

Amount of Success	Total		Transfer Student		Terminal Student	
	N	%	N	%	N	%
None	4	14.5	3	19.5	1	8.5
Very little	6	21.5	4	25.0	2	16.5
Moderate	9	32.0	6	37.5	3	25.0
Great Deal	7	25.0	1	6.0	6	50.0
All	1	3.5	1	6.0	0	-
No Response	1	3.5	1	6.0	0	-
	28	100.0	16	100.0	12	100.0

SUMMARY, CONCLUSIONS AND IMPLICATIONS

Summary

This study was undertaken to determine what experiences (school, work, and military) male junior college students had after graduating, and how these experiences related to their college training. All the male graduates from three San Francisco East Bay junior colleges in 1961 were selected to participate in a follow-up study designed to establish what these men did for a three-year period after graduating. It was hoped that the information collected might prove helpful in evaluating current counseling practices and curricula as they related to the postgraduate experiences of junior college graduates. Many characteristics of these three junior colleges suggested that they might be typical of many other junior colleges in the state; if true, then the findings of this study might have applications beyond the three colleges participating in this investigation.

Since one of the accepted functions of the junior colleges is to train students for employment, such a study as this is important to determine how well this task is being performed. Further, it is important for the state and the nation that each individual achieve his maximum potential, and the role of the junior college in this process needs to be assessed.

The study undertook to determine the following:

1. The kinds of jobs taken by 369 male junior college graduates

2. The effect of different types of junior college training upon first employment and progress on the job

3. The relation of age, academic ability, or grades to employment and job satisfaction.

Information about the graduates was collected from college records, and a questionnaire was developed and mailed to all the male graduates of 1961 from these three colleges. The questionnaire was designed to ascertain what the graduates had been doing since completing junior college; if they were working, how well they were doing in their work; how satisfied they were with their work; and how much and in what ways their junior college experiences had helped them in their employment.

Responses were received from three out of four graduates. A sampling of non-respondents suggested that the total population in the matters under investigation was not dissimilar to the 75 percent who responded.

A year after the questionnaire had been distributed and returned, a follow-up by personal interview was attempted with each of the fifty graduates who had worked full time for the first time following graduation from junior college. The purpose of the personal interview was to establish the accuracy of the answers given on the questionnaire and to explore in depth the graduate's attitude toward his junior college experiences as they related to his employment.

Total Junior College Population

The men in the study were on the average 25.2 years old at graduation, had earned grades in junior college averaging 2.27 on a 4.0 scale, and had academic aptitudes based on national norms at the 42nd percentile. Most of the graduates who responded (87.5 percent) would recommend junior college attendance to a friend in high school while only 4 percent would not recommend junior college.

Most of the responding graduates (81 percent) considered themselves in transfer programs when in college and a large number (54 percent) did attend four-year colleges and universities for further study. Most of the graduates who transferred (86.5 percent) worked full and/or part time while attending the four-year college or university.

The 46 percent of the graduates who did not continue their schooling could be divided into three populations. One population consisted of 22 percent of the graduates, who returned to full-time employment in positions held before and/or during their attendance at junior college. A second population was composed of 18 percent of the graduates, who found full-time work for the first time after completing their junior college work. A third population included 6 percent of the graduates, who neither continued in college nor went to work in the civilian labor force; the majority of this group spent all or most of the years from 1961 to 1964 in the armed forces.

The members of the population who graduated and returned to their old jobs (74 percent) were the oldest in average age (thirty-three years old), had earned the best grade point average (2.55 G.P.A.), and had the greatest aptitude as measured by college entrance tests (50th percentile) of any of the groups. Most of the graduates who returned to their old jobs reported that they were in transfer programs when in junior college. The types of work they returned to ranged from professional positions (engineers, accountants) to semi-skilled (service station operators, sheet metal workers), representing at least thirty-four different occupations held by these sixty-one men. Agriculture and unskilled occupations were not represented.

In the three years following their graduation these men made considerable advancement in their occupations, both financially and in terms of increased job responsibility and level of work. Over half (56 percent) reported that while attending junior college they had taken special training which had helped them in their work, and most of them (80 percent) were satisfied with the jobs they held.

Those who neither continued college training nor joined the civilian labor force were the youngest in average age (twenty-one years old), had earned the poorest grades (2.10 G.P.A.), and had the lowest average aptitude (29th percentile) of the four groups.

The New-to-Work Graduates

The 18 percent of the population who found full-time employment for the first time following graduation consisted of thirty-one transfer students and nineteen terminal students. The terminal students were, on the average, three years older, had lower aptitude test scores, but had earned grades slightly better than the transfer students. Most of the graduates went to work in or near the local community served by the junior college and were still working in the area three years later.

These graduates found a variety of positions in all the major categories, except unskilled, listed in the Dictionary of Occupational Titles. Jobs ranged from professional and managerial (accounting clerk, mechanical engineer) to clerical and sales (store manager, salesman), to service (dice dealer, bartender), to agriculture (vineyard manager), to skilled (carpenter, quality control), and to semi-skilled (truck driver, instrument helper). Three out of four of these graduates reported that their junior college training had helped them in their work while the fourth person reported that the training had not made any difference. Half of the transfer students and three-fourths of the terminal students indicated that their junior college experiences had aided them in job placement, in maintaining themselves in their jobs, and in promotions.

The terminal students tended to know the kinds of jobs they would take after graduation, and most of them found employment to match their training; these students gave more credit to the junior college for their occupational success than was given by the transfer students. The students who had no clear occupational goals when in junior college were more likely to shift their fields of work in the three years following graduation.

After graduation, eight out of ten terminal students found jobs they wanted, and three years later this same ratio of graduates was satisfied that the job they had was the one they wanted. Transfer students, on the other hand, had not been so successful in finding the job they wanted directly out of junior college. Five out of ten reported that the position they took was not the one they wanted at the time. Three years later, however, seven out of ten of this group reported they were working at the job they wanted.

The level of work found by transfer and terminal graduates was approximately the same, with half of each group starting at beginning jobs. Three years later nearly one-fifth of each group was still working at a beginning level. In job responsibility, transfer students tended to have slightly more supervisory responsibilities than terminal students, both in the job taken directly after graduation and three years later.

Starting pay for the terminal students was approximately fifty dollars per month higher than for the transfer student, but after three years this difference in pay was no longer evident. General satisfaction in most aspects of their employment in 1964 was reported by both transfer and terminal graduates.

Personal interviews were held with twenty-eight of the fifty graduates in this population, and their responses were consistent with the answers received on the questionnaires. The interviews also made it possible to learn the ways in which the junior college experiences had helped these graduates. Their most frequent response was that the junior college had helped them learn usable skills. Nearly as frequently mentioned were comments that the graduates, through their junior college experiences, had learned to deal with people and they had also gained general knowledge which was useful in their work.

The graduates indicated that more occupational guidance than they had received should be given at the college. Half of the graduates had made their career choices unassisted.

The transfer student gave little credit to the junior college for training him for his employment, yet most of the transfer students would not have been willing to change to a terminal program in junior college. The terminal student, on the other hand, was more likely to credit the college with preparing him for his work. Nevertheless, he would have been more willing to change programs had the terminal program not been available.

Conclusions

Based on the findings of this study the following conclusions seem justified:

1. The junior colleges with their present offerings of transfer and terminal programs serve well the student who works following graduation. The training in skills, the general education, and the knowledge acquired concerning working relationships with people, which are learned at junior colleges, serve graduates in finding and in keeping jobs.

2. The terminal programs as currently offered at junior colleges serve three important functions:

   a. Provide programs in which many students with limited academic interests and abilities can complete two years of college training.

   b. Provide training programs which help graduates enter work in the fields of their interest at higher starting pay than students from transfer programs; and help them succeed in their chosen work.

   c. Assist students in career decisions, thus helping them get started in suitable fields of work with a minimum of wasted effort exploring unsuitable jobs.

3. More counseling and guidance in career decisions should be given to junior college students. The students need to be made aware of opportunities for employment which match their interests and abilities, and while in junior college the students need to be guided in making the transition from college to work. To make such career counseling and guidance effective, whenever possible counselors and instructors should be employed who have varied practical work experiences in addition to academic training.

4. Junior colleges, despite serving a very mobile population, should continue to prepare students for jobs available in their local communities since the majority of their graduates who go to work will find employment locally.

5. Junior colleges cannot offer specific training for all the jobs that their graduates will find, and therefore each junior college should develop a basic group of vocational programs which will appeal to a range of ability levels and a range of interests typical of junior college students. The vocational training in each program

should include concepts basic to many fields of work, should prepare the student for future changes in his chosen field, should encourage students to recognize the need for constant study and improvement, and should make it clear to students that the skills taught and knowledge acquired have application to other fields of work as well.

6. Male junior college students need to be made aware of the importance of preparing for employment and the value and advantages of vocational training at the two-year college.

7. Follow-up studies by questionnaires and interviews of graduates should be made to assist junior colleges in an evaluation of their programs, their instruction, and their counseling.

Implications for the Three Junior Colleges of the Study

The implications of the findings have direct application to the three junior colleges studied and may also apply to other colleges in the state which have similar objectives, similar student populations, and a similar balance of liberal arts and vocational programs. Specifically the major implications of this study to the three junior colleges are as follows:

1. These colleges should continue to offer terminal programs and programs leading to employment in the local community.

2. They should develop special programs geared to the specific needs of the working citizens in the local community. The needs and interests of this group should be surveyed, and curricula added, modified, or enriched to serve this older group.

   In addition to special programs for this group related to maturity and experiences, special counseling should be made available at times convenient to them.

3. Publicity should be given to the numbers of older students attending the college and working toward degrees. Knowledge that the junior college is not restricted to the young should encourage more older people to take advantage of the lifelong educational opportunities available locally.

4. The classification of students as transfer or terminal needs to be reconsidered. Many transfer students conclude their college training in junior college, whereas some terminal students continue. Terminal implies end of the line and appears to be less desirable as a classification to students than transfer which implies full college status. Some other designations could be developed which would avoid the present connotations of transfer and terminal. The programs now called terminal might be given status by a new label or by requiring screening tests and interviews before a student was accepted for training.

5. The vocational training function of the junior colleges should be improved by:

    a. Making vocational instruction applicable as much as possible to a variety of trades, not just to one specific field.

    b. Training the student how to meet and to prepare for changing conditions and to be aware of the variety of occupations within his range of interests and abilities.

    c. Including in the instruction, whenever possible in liberal arts programs, information and skill training that has applications to successful employment (e.g., science instructor might emphasize applications of scientific methods in business. Manipulative skills learned in a science class could provide experiences which were useful to a student in certain kinds of employment.)

    d. Encouraging in all classes positive attitudes of students toward work.

    e. Establishing a faculty committee to advise and assist the college's employment service in job placement, employer contact and job research.

    Such improved vocational training would not only be useful for the student who graduated and got a job as a start on a working career but also would be useful to those students who would be working their way through two years or more of college.

6. The vocational training courses as alternates to liberal arts courses need to be understood by students, faculty, and counselors. Students with academic limitations need to be diverted to programs where they can succeed. This implies an examination of existing curricula to determine whether programs offered would appeal to and would serve the student not destined to succeed in the transfer program.

    If such redirecting became a planned part of all counselor and instructor discussions with students, then many students might be helped to realize their potential with less loss of time and cost to themselves and to the college.

7. The older employed students could be a source of assistance to the college in developing useful occupational training programs. They could serve as consultants in curriculum development, and they could be a source of information to students interested in finding positions similar to those of the older employed students.

8. Counselors at the college must be assisted by the faculty in aiding students in their career decisions. The present staff will need to be trained in vocational counseling and be granted time to assist students in making this important decision. Faculty members particularly, since they work closely with students, are in a position to help. Faculty members with work experiences beyond the classroom, sensitive to students' interests and abilities,

must be found to fill the teaching positions at junior colleges. Some students, when they enter, need to be guided into college programs, but before certain other students complete their two years they must be guided into employment as well. And such counseling may lead to further schooling, or work, or both. To accomplish such counseling out of college the counselors and the faculty need to be aware of job opportunities in the community, the requirements needed to qualify for the jobs, and ways in which existing courses and programs could assist a student to become qualified for such employment.

By hiring instructors with experience in other types of employment and giving them the opportunity to counsel students in vocational matters, the courses they teach might be developed in ways more useful to the students who go to work after graduation. To further assist students and perhaps make vocational counseling easier, introductory courses for each major might contain a unit on job opportunities related to the major. Lectures, discussions, guest speakers from the field, and visits to business and industry might assist the student in obtaining an objective view of the occupations related to the major. A well developed unit could easily show how there are several levels of work within each occupational field and that educational achievement and experience usually determine the level at which one works.

9. The terminal programs at these colleges should be re-examined to determine whether they are doing the best possible job of training for employment. Since graduates from the transfer programs do nearly as well in starting salary, in level of work, and in job responsibility, the terminal programs may not be as effective as they might be.

10. The characteristics of students at each college should be studied in an effort to establish what training they could best use to prepare for work to match their employment potentials.

11. Each college might wish to consider developing special on-the-job training programs during the summer for the graduate who had planned to transfer and then found he would have to go to work. Such programs should be designed not only to train students for employment but to encourage the student to find a field in which he could reach his greatest working potential. It is important that the graduate find his work direction as soon as possible, preferably before starting work so that he does not waste his own time or that of his employer. It is not only important that the graduate find a field to match his interests and abilities, but that he progress in it as far as possible; to this end the college should offer upgrading courses and even exploratory courses for the graduate who might wish to continue to look at the possibilities in other fields of work. Individual study projects under the direction of a capable and versatile instructor could serve a great many mature graduates who knew what they wanted to learn.

Implications for Further Study

Further study is needed on the subject of what happens to the junior college graduates who do not go on to further schooling. Additional investigation might well compare graduates, based on whether the program they had taken in junior college was job oriented, rather than whether they were in transfer or terminal programs.

Additional information might well be collected to identify characteristics of the students, such as socioeconomic position, family responsibilities, emotional stability, and persistence; and to relate those characteristics in determining the students who would gain most from completing the baccalaureate degree and those whose goal should be employment immediately after completing junior college. Such factors, if accurately established, could be an aid to counselors in their efforts to guide students to the most useful programs.

The early drop-outs from vocational programs might be compared with the vocational graduates of the junior college to determine the relative value of the junior college training to on-the-job training. It may be that the best students are dropping out of the vocational programs in order to accept full-time employment. Perhaps two full years of training are unnecessary for good students to get a job. There may be enough of them leaving college shortly before graduation to justify the development of special evening courses to make it possible and attractive for this type of student to complete the formal requirements for the A.A. degree.

The terminal students with relatively low scores on their college entrance tests earned grades which averaged slightly higher than the grades earned by their classmates in transfer programs who had scored much higher on their entering tests. The college entrance tests may not be accurate predictors of student grade success in college, or there may be factors connected with differences between the transfer and terminal programs which might be revealed by research. A study designed to establish the reasons behind the relative achievements of these two groups would have significance for counselors and instructors.

Many of the older students returned to work after graduating. Some had taken courses in junior college which they reported had been useful to them in their jobs. Since more students graduated and returned to jobs held previously than graduated and found new jobs, it would seem advisable to research the interests and needs of this older group in order to assess the curriculum in terms of upgrading employees as well as training for new employment. Because the occupational returnee knows in detail the kind of job he will have after he finishes junior college, it should not be difficult to develop special courses, if appropriate, to provide him with instruction directly useful in his work.

One other important area of study must be mentioned before the subject of further research is concluded. The requirements for employment in a changing job market would be worthy of constant study to assist junior colleges in preparing their graduates for lifetime careers. This subject has been investigated and reported at the national level, but with rapid technological changes taking place today it is important that such information be current and applicable in the local community served by each junior college. Each junior college having as one of its objectives the training of students for employment might well establish a continuous research project to keep abreast of anticipated local employment needs. With current information the colleges would be able to provide their students with the information, skills, and attitudes necessary to succeed in anticipated job openings.

This study revealed certain facts about junior college graduates which, it is hoped, may lead to further investigation of the relationship between junior college training and employment, and in time may result in improved junior college teaching, counseling, and training programs.